Online ISSN : 2249-4618
Print ISSN : 0975-5888
DOI : 10.17406/GJMRA

Global Journal

of Medical Research: I

Surgeries and Cardiovascular System

Highlights

- Symptoms of Intestinal Dysbiosis
- Evolution of Appendicular Mucoceles
- Weight Gain after Bariatric Surgery
- Complication of Emergency Laparotomy

Discovering Thoughts, Inventing Future

VOLUME 22 ISSUE 2 VERSION 1.0

Global Journal of Medical Research: I
Surgeries and Cardiovascular System

Global Journal of Medical Research: I
Surgeries and Cardiovascular System

Volume 22 Issue 2 (Ver. 1.0)

Open Association of Research Society

Incorporation No.: 0423089
License No.: 42125/022010/1186
Registration No.: 430374
Import-Export Code: 1109007027
Employer Identification Number (EIN):
USA Tax ID: 98-0673427

Global Journals Inc.

*(A Delaware USA Incorporation with "Good Standing"; **Reg. Number: 0423089**)*
Sponsors: Open Association of Research Society
Open Scientific Standards

Publisher's Headquarters office

Global Journals® Headquarters
945th Concord Streets,
Framingham Massachusetts Pin: 01701,
United States of America
USA Toll Free: +001-888-839-7392
USA Toll Free Fax: +001-888-839-7392

Offset Typesetting

Global Journals Incorporated
2nd, Lansdowne, Lansdowne Rd., Croydon-Surrey,
Pin: CR9 2ER, United Kingdom

Packaging & Continental Dispatching

Global Journals Pvt Ltd
E-3130 Sudama Nagar, Near Gopur Square,
Indore, M.P., Pin:452009, India

Find a correspondence nodal officer near you

To find nodal officer of your country, please email us at *local@globaljournals.org*

eContacts

Press Inquiries: *press@globaljournals.org*
Investor Inquiries: *investors@globaljournals.org*
Technical Support: *technology@globaljournals.org*
Media & Releases: *media@globaljournals.org*

Pricing (Excluding Air Parcel Charges):

Yearly Subscription (Personal & Institutional)
250 USD (B/W) & 350 USD (Color)

Editorial Board

Global Journal of Medical Research

Dr. Han-Xiang Deng

MD., Ph.D
Associate Professor and Research Department
Division of Neuromuscular Medicine
Davee Department of Neurology and Clinical Neurosciences
Northwestern University Feinberg School of Medicine
Web: neurology.northwestern.edu/faculty/deng.html

Dr. Pina C. Sanelli

Associate Professor of Radiology
Associate Professor of Public Health
Weill Cornell Medical College
Associate Attending Radiologist
NewYork-Presbyterian Hospital
MRI, MRA, CT, and CTA
Neuroradiology and Diagnostic Radiology
M.D., State University of New York at Buffalo,
School of Medicine and Biomedical Sciences
Web: weillcornell.org/pinasanelli/

Dr. Roberto Sanchez

Associate Professor
Department of Structural and Chemical Biology
Mount Sinai School of Medicine
Ph.D., The Rockefeller University
Web: mountsinai.org/

Dr. Michael R. Rudnick

M.D., FACP
Associate Professor of Medicine
Chief, Renal Electrolyte and Hypertension Division (PMC)
Penn Medicine, University of Pennsylvania
Presbyterian Medical Center, Philadelphia
Nephrology and Internal Medicine
Certified by the American Board of Internal Medicine
Web: uphs.upenn.edu/

Dr. Feng Feng

Boston University
Microbiology
72 East Concord Street R702
Duke University
United States of America

Dr. Seung-Yup Ku

M.D., Ph.D., Seoul National University Medical College,
Seoul, Korea Department of Obstetrics and Gynecology
Seoul National University Hospital, Seoul, Korea

Dr. Hrushikesh Aphale

MDS- Orthodontics and Dentofacial Orthopedics.
Fellow- World Federation of Orthodontist, USA.

Santhosh Kumar

Reader, Department of Periodontology,
Manipal University, Manipal

Gaurav Singhal

Master of Tropical Veterinary Sciences, currently pursuing Ph.D in Medicine

Dr. Aarti Garg

Bachelor of Dental Surgery (B.D.S.) M.D.S. in Pedodontics and Preventive Dentistr Pursuing Phd in Dentistry

Sabreena Safuan

Ph.D (Pathology) MSc (Molecular Pathology and Toxicology) BSc (Biomedicine)

Getahun Asebe

Veterinary medicine, Infectious diseases, Veterinary Public health, Animal Science

Dr. Suraj Agarwal

Bachelor of dental Surgery Master of dental Surgery in Oromaxillofacial Radiology.
Diploma in Forensic Science & Oodntology

Osama Alali

PhD in Orthodontics, Department of Orthodontics, School of Dentistry, University of Damascus. Damascus, Syria. 2013 Masters Degree in Orthodontics.

Prabudh Goel

MCh (Pediatric Surgery, Gold Medalist), FISPU, FICS-IS

Raouf Hajji

MD, Specialty Assistant Professor in Internal Medicine

Surekha Damineni

Ph.D with Post Doctoral in Cancer Genetics

Arundhati Biswas

MBBS, MS (General Surgery), FCPS, MCh, DNB (Neurosurgery)

Rui Pedro Pereira de Almeida

Ph.D Student in Health Sciences program, MSc in Quality Management in Healthcare Facilities

Dr. Sunanda Sharma

B.V.Sc.& AH, M.V.Sc (Animal Reproduction, Obstetrics & gynaecology), Ph.D.(Animal Reproduction, Obstetrics & gynaecology)

Shahanawaz SD

Master of Physiotherapy in Neurology PhD- Pursuing in Neuro Physiotherapy Master of Physiotherapy in Hospital Management

Dr. Shabana Naz Shah

PhD. in Pharmaceutical Chemistry

Vaishnavi V.K Vedam

Master of dental surgery oral pathology

Tariq Aziz

PhD Biotechnology in Progress

Contents of the Issue

Global Journal of Medical Research: I
Surgeries and Cardiovascular System
Volume 22 Issue 2 Version 1.0 Year 2022
Type: Double Blind Peer Reviewed International Research Journal
Publisher: Global Journals
Online ISSN: 2249-4618 & Print ISSN: 0975-5888

Psychological Factors Involved in Weight Gain after Bariatric Surgery. Systematic Review

By Marcelo Barros Weiss (WEISS MB) & Priscilla Azalim Villa Real (REAL PAV)

Abstract- Obesity (WHO, 2019), is an incurable and chronic pathological condition, of degenerative evolution, which affects thousands of people around the world. The objectives of the study are to analyze the psychological factors in patients undergoing bariatric surgery who have gained weight and to relate adherence to the multidisciplinary team as a cause. This is a systematic literature review research with articles in the databases: Scientific and Technical Literature of Latin America and the Caribbean, National Library of the United States, MEDLINE and in the Scientific Eletronic Library Online database, with descriptors: "Postoperative Bariatric Surgery", "Psychology and Bariatric Surgery" and "Weight Gain after Bariatric Surgery" associated with the Boolean operator AND. Between 2017 and 2022, a total of 794 articles in Portuguese, Spanish and English were analyzed. We excluded 760 articles because they were not within the focus of this review, as well as those that did not meet the inclusion criteria. The final sample had 33 publications. The analysis of the data demonstrated unequivocally that the abandonment of psychological and nutritional counseling contributed decisively to the weight gain of patients.

Keywords: *post bariatric surgery; psychology and bariatric surgery; weight regain after bariatric surgery.*

GJMR-I Classification: *DDC Code: 617.0231 LCC Code: RD99*

Strictly as per the compliance and regulations of:

Psychological Factors Involved in Weight Gain after Bariatric Surgery. Systematic Review

Factores Psicológicos Implicados En El Aumento De Peso Después De La Cirugía Bariátrica. Revisión Sistemática

Marcelo Barros Weiss (WEISS MB) [α] & Priscilla Azalim Villa Real (REAL PAV) [σ]

Resumen- La obesidad (OMS, 2019), es una condición patológica incurable y crónica, de evolución degenerativa, que afecta a miles de personas en todo el mundo. Los objetivos del estudio son analizar los factores psicológicos en pacientes sometidos a la cirugía bariátrica que han aumentado de peso y relacionar la adherencia al equipo multidisciplinar como causa. Esta es una investigación de revisión sistemática de la literatura con artículos en las bases de datos: Literatura Científica y Técnica de América Latina y el Caribe, Biblioteca Nacional de los Estados Unidos, MEDLINE y en la base Scientific Eletronic Library Online, con descriptores: "Cirugía Bariátrica Postoperatoria", "Psicología y Cirugía Bariátrica" y "Aumento de Peso después de la Cirugía Bariátrica" asociados al operador booleano AND. Entre los años 2017 a 2022 se analizaron un total de 794 artículos en los idiomas portugués, español e inglés. Se excluyeron 760 artículos por no encontrarse dentro del foco de esta revisión, así como también aquellos que no cumplieron con los criterios de inclusión. La muestra final tuvo 33 publicaciones. El análisis de los datos demostró de manera inequívoca que el abandono del asesoramiento psicológico y nutricional contribuyó de manera determinante en el aumento de peso de los pacientes.

Palabras Clave: postoperatorio de cirugía bariátrica; psicología y cirugía bariátrica; aumento de peso después de la cirugía bariátrica.

Abstract- Obesity (WHO, 2019), is an incurable and chronic pathological condition, of degenerative evolution, which affects thousands of people around the world. The objectives of the study are to analyze the psychological factors in patients undergoing bariatric surgery who have gained weight and to relate adherence to the multidisciplinary team as a cause. This is a systematic literature review research with articles in the databases: Scientific and Technical Literature of Latin America and the Caribbean, National Library of the United States, MEDLINE and in the Scientific Eletronic Library Online database, with descriptors: "Postoperative Bariatric Surgery", "Psychology and Bariatric Surgery" and "Weight Gain after Bariatric Surgery" associated with the Boolean operator AND. Between 2017 and 2022, a total of 794 articles in Portuguese, Spanish and English were analyzed. We excluded 760 articles because they were not within the focus of this review, as well as those that did not meet the inclusion criteria. The final sample had 33 publications. The analysis of the data demonstrated unequivocally that the abandonment of psychological and nutritional counseling contributed decisively to the weight gain of patients.

Keywords: post bariatric surgery; psychology and bariatric surgery; weight regain after bariatric surgery.

Author α: Institución: Sabin Teaching and Research – Juiz de Fora, Cirujano General y Digestivo de Minas Gerais, Magíster en Cuidados Intensivos y Doctorado en Salud Pública por UCES (Buenos Aires), Titular de la Sociedad Brasileña de Cirugía Bariátrica y Metabólica. (SBCBM), Titular de la Sociedad Brasileña de Cirugía Mínimamente Invasiva y Robótica (SOBRACIL), Titular de la Sociedad Brasileña de Endoscopia Digestiva (SOBED) Profesor de Medicina, Facultad de Ciencias , Médicas y de la Salud - SUPREMA Dirección: Rua Judith de Paula, número 39, Barrio: Aeropuerto. Juez de Fora. MG. Código Postal: 36038-360. e-mail: marcelobarrrosweiss@gmail.com

Author σ: Institución: UniAcademia., Estudiante de Psicología, Rua Judith de Paula, número 39, Bairro Aeroporto. Juez de Fora. MG. Código Postal: 36038-360. e-mail: azalimvr@gmail.com

I. Introducción

La obesidad es una enfermedad crónica degenerativa e incurable según la Organización Mundial de la Salud (SBEM, 2020). Se trata de un gran desafío para la salud pública mundial (Hruby et al., 2015). Es multifactorial, causando diversos problemas a la salud y trayendo muchas complicaciones físicas y psicológicas. La diversidad de esta enfermedad es muy grande con diferentes presentaciones, tanto en la intensidad de la obesidad como en sus formas de desarrollo con el pasar de los años (Macedo et al., 2019).

En todo el mundo, un total de 1,9 billones de adultos son considerados con sobrepeso y 609 millones son obesos. Actualmente, el 39% de la población mundial se encuentra fuera del peso ideal (Chooi et al., 2018).

Se relacionan a la obesidad las enfermedades de tipo respiratorias, cardiovasculares, articulares y dermatológicas, asociada a la aparición de dislipemia, diabetes no insulinodependiente y ciertos tipos de cáncer que forman parte del espectro de enfermedades conexas con la obesidad en todo el planeta. Siempre se debe tener en cuenta que los niveles de obesidad varían de una región a otra, y que hay aspectos biopsicosociales involucrados (Moura et al., 2021).

La cirugía bariátrica se ha convertido cada año en un método popular y muy eficaz para reducir el peso de las personas obesas, además de controlar sus morbilidades relacionadas. En cirugía, la idea es promover la reducción de la ingesta de volumen o de su

absorción, y también la asociación de los dos medios con técnicas mixtas. La reducción del Índice de Masa Corporal (IMC = kg/h2 (m)) es el principal objetivo de forma práctica, pero sus efectos a largo plazo traen consigo el control de las enfermedades somáticas ya mencionadas y del control, al menos en la mayoría, de los problemas psicológicos desarrollados como resultado de la obesidad. Un individuo que supera los 30 kg/m^2 se considera obeso (Cassin et al., 2020).

La Organización Mundial de la Salud (2019) clasifica la obesidad en: grado I (sobrepeso moderado), IMC entre 30 y 34,9 kg/m^2; obesidad grado II (obesidad moderada) con un IMC entre 35 y 39,9 kg/m^2 y obesidad grado III (obesidad mórbida) con un IMC superior a 40 kg/m^2 (Bardal et al., 2016).

Un análisis de datos del Instituto Brasileño de Geografía y Estadística (IBGE, 2019) mostró que 95,9 millones de brasileños tienen sobrepeso, de los cuales 41,2 millones son considerados obesos. Eso significa que el 60,3% de los brasileños mayores de 18 años tienen sobrepeso o están obesos (PNS Brasil, 2020). Estos números son considerados alarmantes para el Sistema Único de Salud (SUS), que, sumado a las morbilidades ya relacionadas, impactan fuertemente en las cuentas de salud pública.

Sin embargo, en América del Norte las cifras presentadas por "*Trust for America's Health*" (2020) informan un aumento en la prevalencia de la obesidad, especialmente entre las personas más jóvenes. Los individuos de 2 a 19 años tienen una tasa de obesidad del 19,3% frente al 5,5% encontrado en los años de 1970. En los adultos de 18 a 24 años hubo una prevalencia de obesidad del 18,9% frente al 37,6% de aquellos con más de 45 años. La condición de "inseguridad alimentaria" ya está siendo considera una realidad en la población norteamericana.

Es necesario entender muy bien lo que será realizado y las modificaciones que vendrán. Por ello, además de las orientaciones técnicas, es aconsejable el acompañamiento psicológico en todas las etapas del proceso. Los pacientes consideran que el período inmediatamente posterior a la cirugía es difícil. Existe una gran expectativa con respecto al postoperatorio inmediato y el dolor que se puede presentar. Ya en el postoperatorio más tardío, los cambios rápidos que se producen, tanto en los hábitos alimentarios como en el propio organismo, acaban exigiendo al paciente una reflexión y surgen las cuestiones emocionales. Es en este momento que el trabajo psicológico/psiquiátrico es de suma importancia, involucrando al paciente y haciéndolo responsable de sus actos y transformándose, quitando viejos hábitos de su vida.

El tratamiento de la obesidad requiere de un equipo multidisciplinario, donde el papel de la psicología dentro del equipo es el de evaluar si el individuo está emocionalmente apto para la cirugía o no (Van Hout et al., 2005 y Sala et al., 2017). También el de auxiliar al candidato a la cirugía como en la comprensión de todos los aspectos derivados del período prequirúrgico; evaluarlo en cuanto a su comprensión de la cirugía, riesgos y complicaciones, beneficios esperados, exámenes y seguimientos requeridos en el largo plazo, las consecuencias emocionales, sociales y físicas y responsabilidades esperadas, incluida la detección y el tratamiento de pacientes con o potencialmente sujetos a trastornos mentales graves (Brynt et al., 2020).

Cuadros de trastorno alimentario compulsivo, trastorno del alcoholismo, de la ansiedad o del humor están muy relacionados tanto en los textos sobre este tema como están presentes en el postoperatorio (Meany et al., 2014; Duarte-Guerra et al., 2015; de Zaan et al., 2016).

Este estudio tiene como objetivos analizar los factores psicológicos implicados en pacientes sometidos a la cirugía bariátrica y que tuvieron aumento de peso, además de establecer el grado de compromiso en el tratamiento de este con el equipo multidisciplinar como posibles factores causales del aumento de peso.

II. Metodología

Para llevar a cabo esta revisión literaria se realizó una búsqueda bibliográfica en las bases de datos por la metodologia PRISMA: Literatura Científica y Técnica de América Latina y el Caribe (LILACS), Sistema en Línea de Búsqueda y Análisis de Literatura Médica (PUBMED/MEDLINE) y en la base electrónica Scientific Eletronic Library Online (SCIELO), usando los descriptores: "Postoperatorio de cirugía bariátrica" (Post Bariatric Surgery), "Psicología y cirugía bariátrica" (Psicology and Bariatric Surgery) y "Aumento de peso después de la cirugía bariátrica" (Weight Regain After Bariatric Surgery), asociados al operador booleano AND. Todos los datos fueron recopilados, tabulados y analizados en enero de 2022 (Urrútia, 2010). Considerando los criterios de inclusión de artículos, inicialmente fueron seleccionados 794 originales disponibles en portugués, inglés y español, comprendidos entre enero de 2017 y enero de 2022 (figura 1). Estos artículos fueron seleccionados porque analizaban la relación entre aspectos del aumento de peso y sus relaciones con las psicopatologías y la adherencia o no al equipo multidisciplinario. Los artículos incluidos pueden ser ensayos clínicos, estudios de cohortes, cohortes históricas o estudios de casos y controles. Los artículos como Narrativa, Editorial, Carta al Editor, Comunicación preliminar o reporte de casos fueron excluidos. De cada artículo se extrajo la siguiente información: autor, año de publicación, número de pacientes, tiempo de seguimiento, casos de estudio, metodología aplicada y resultados. Los resultados de los estudios fueron analizados descriptivamente.

Diagrama de flujo de recopilación de datos

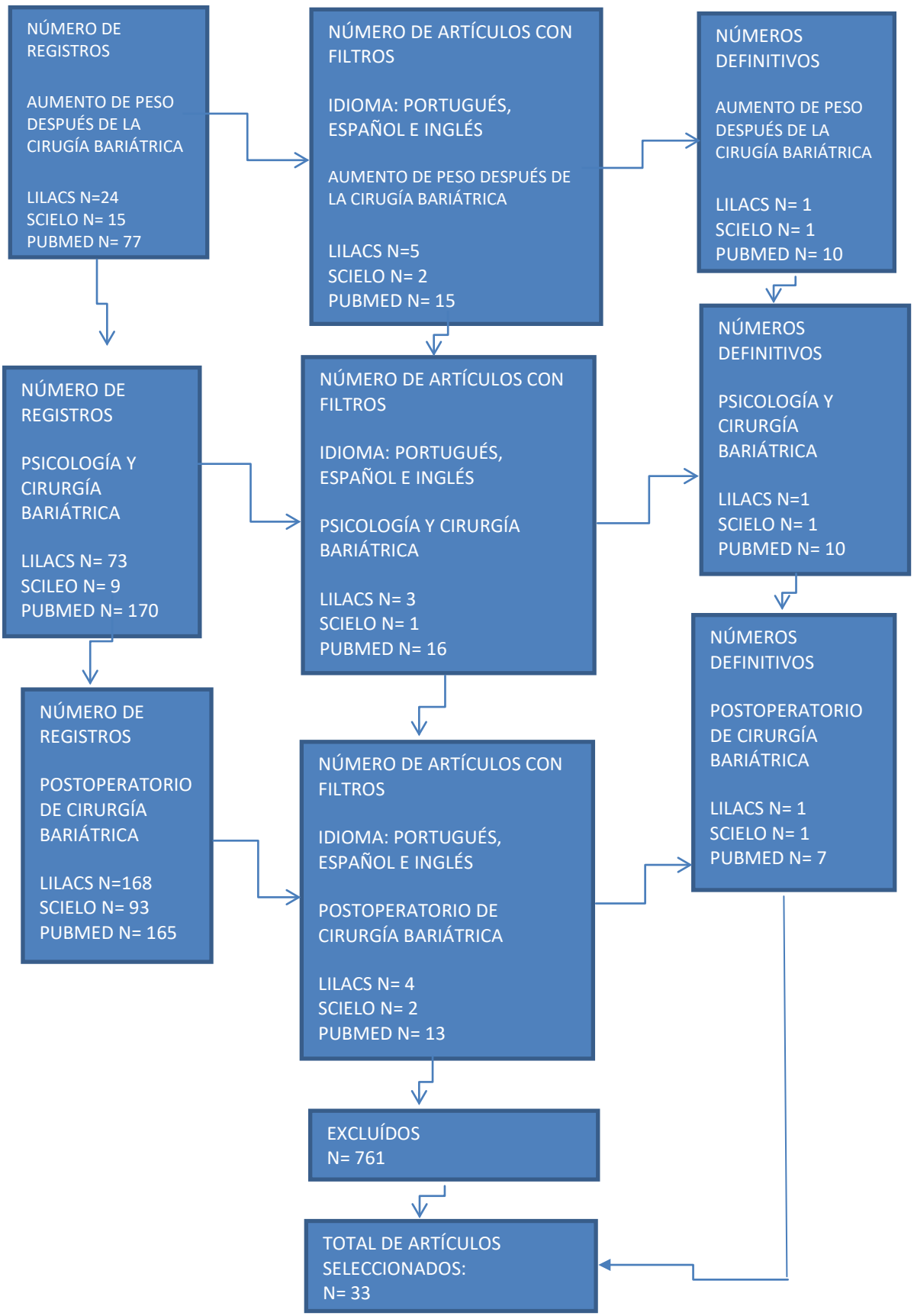


Figura 1

Se excluyeron del total 761 artículos, ya que no contemplaban el foco de esta revisión, así como los que estaban repetidos (22) y los que tenían textos incompletos. Después de analizar el título, el resumen y los objetivos del estudio se seleccionaron 33 artículos para la muestra final.

Todos los resultados fueron tabulados; ellos mostraron los elementos que formaban parte de la idea sobre el tema. La discusión de estos resultados se realizó a partir de la referencia publicada y sus relaciones con los artículos seleccionados, presentando los puntos principales y sus posibles diferencias, demostrando así su relevancia para este estudio.

Los artículos fueron debidamente referenciados, identificando y respetando a sus autores y coautores, observando el rigor ético y la propiedad intelectual con las debidas citas de las obras consultadas.

III. Resultados y Discusión

Se encontraron 33 artículos seleccionados en la base de datos LILACS; MEDLINE/PUBMED y SCIELO, que se resumen en las tres tablas siguientes. Las tablas muestran las evoluciones anuales de los artículos publicados desde enero de 2017 hasta enero de 2022, así como las principales observaciones de las publicaciones relacionadas y sus impactos como factores relacionados con el aumento de peso en pacientes posbariátricos.

Tabla 1: Palabras clave: Aumento de peso después de la cirugía bariátrica (12 artículos)

Autor	Título	Base de datos	Tipo de estudio	Muestra	Resultados relevantes
Paul et al. (2017)	Cognitive behavioral therapy and predictors of weight loss in bariatric surgery patients	PUBMED	Investigación de predictores de aumento de peso después de la cirugía bariátrica. Revisión de literatura	20 artículos	Se necesitarán más estudios en terapia conductual para evaluar su eficacia en el control del aumento de peso
Kortchmar et al. (2018)	Reganho de peso após a cirurgia bariátrica: um enfoque da fenomenologia social	SCIELO	Investigación cualitativa realizada en un Hospital Público de la ciudad de São Paulo. La recolección de datos se realizó entre marzo y mayo de 2017, a través de entrevistas y testimonios.	17 pacientes	Las experiencias de aumento de peso se destacan en el grupo estudiado y podrían apoyar la mejora de las prácticas profesionales del equipo multidisciplinario.
Shukla et al. (2018)	Current concepts in management of weight regain following bariatric surgery	PUBMED	Estudio de revisión de la literatura que vislumbró aspectos involucrados en la recaída de peso después de la cirugía bariátrica.	32 estudios	Se necesitan más estudios prospectivos para determinar la mejor manera de evaluar la combinación de terapias conductuales y farmacológicas, aún más allá del momento del tratamiento.
Autor	**Título**	**Base de datos**	**Tipo de estudio**	**Muestra**	**Resultados relevantes**
Nascimento, (2019)	Transtorno do uso de álcool em pacientes submetidos a cirurgia bariátrica	LILACS	Estudio observacional retrospectivo que incluyó pacientes y acompañados en la consulta ambulatoria de Endocrinología	47 pacientes	Observaciones relevantes en relación a la aparición de trastornos alimentarios y alcohol.

Sarwer et al, (2019)	Psychopatholo-gy, disordered eating, and impulsivity as predictors of outcomes of bariatric surgery	PUBMED	Estudio de revisión de literatura que vislumbró aspectos psicopatoló-gicos involucrados en la recaída de peso	43 estudios	Varios estudios sugieren que la presencia de psicopatología preoperatoria se asocia con pérdida de peso subóptima, complicaciones posoperatorias y resultados psicosociales desfavorables.
Constant et al. (2020)	Meeting of Minds around Food Addiction: Insights from Addiction Medicine, Nutrition, Psychology and Neurosciences	PUBMED	Esta revisión, centrada en la adicción a la comida (FA), considera las opiniones de expertos con diferentes antecedentes en medicina de la adicción, nutrición, psicología de la salud y neurociencias del comportamiento	22 estudios	Las intervenciones multinivel podrían combinar entrevistas motivacionales, terapias cognitivas conductuales y grupos de autoayuda, mientras se benefician de modernas herramientas exploratorias e intervencionistas para enfocarse en procesos neurocognitivos específicos.
Bryant et al. (2020)	The effects of bariatric surgery on psychological aspects of eating behaviour and food intake in humans	PUBMED	Revisión de la literatura de 2008 a 2018 sobre los impactos de la cirugía bariátrica en la alimentación y el comportamiento psicosocial	26 estudios	Existen varios factores que influyen en el individuo para regular con éxito su aporte energético postoperatorio, tales como: Desinhibición, Contención, Hambre, Alimentación Emocional, Alimentación Descontrolada, Psicopatología y Estado de Confort.
Autor	Título	Base de datos	Tipo de estudio	Muestra	Resultados relevantes
El Ansari, Elhag. (2021)	Weight Regain and Insufficient Weight Loss After Bariatric Sur gery: Definitions, Prevalence, Mechanisms, Predictors, Prevention and Management Strategies, and Knowledge Gaps-a Scoping Review.	PUBMED	Búsqueda en bases de datos PUBMED, SCIELO, EMBASE, CINAHL. Revisión del alcance	30 artículos	Existen lagunas en el conocimiento de los factores que conducen a la recuperación de peso, evaluado en todos los artículos de revisión presentados. Necesitamos más estudios.

Athanasiadis et al. (2021)	Factors associated with weight regain post-bariatric surgery: a systematic review.	PUBMED	Método PRISMA aplicado a una revisión sistemática de literatura en la base de datos PUBMED, EMBASE y COCHRANE Library en julio de 2019	32 estudios	La investigación informa que, de cada 6 pacientes, 1 tendrá una recuperación significativa del psoa. Se necesitan mejores métodos pre y postoperatorios para reducir el riesgo.
Busetto et al. (2021)	Mechanisms of weight regain.	PUBMED	Se realizó una búsqueda sistemática en MEDLINE, Google Scholar, Cochrane, National Collaborating Center for Methods and Tools (NCCMT) y Practice-based Evidence in Psychopatholog y and Behavior	32 estudios	El manejo de las intervenciones en pacientes que recuperan peso tiene que ser multimodal y de largo plazo.
Cornejo-Pareja et al. (2021)	Factors Related to Weight Loss Maintenance in the Medium-Long Term after Bariatric Surgery: A Review	PUBMED	Revisar estudios realizados en la base de datos PUBMED enfocados en los últimos seis años (2015-2021)	20 estudios	Las evidencias son contradictorias y se necesitan ensayos clínicos a largo plazo para sacar más conclusiones.

Autor	Título	Base de datos	Tipo de estudio	Muestra	Resultados relevantes
Alexandrou et al. (2022)	Revision of Roux-en-Y Gastric Bypass for Inadequate Weight Loss or Weight Regain	PUBMED	Revisión sistemática de la literatura sobre cirugía bariátrica en pacientes con aumento de peso	57 artículos	La revisión de la cirugía bariátrica es factible, pero los resultados son muy variables, principalmente debido a los muchos factores que involucran el problema

Tabla 2: Palabras clave: Psicología y cirugía bariátrica (12 artículos)

Autor	Título	Base de datos	Tipo de estudio	Muestra	Resultados relevantes
Marchesini et al. (2017)	A percepção do corpo em pacientes bariátricos e a experiência do medo de reganho de peso	LILACS	Se utilizó un guion de entrevista semiestructurada sobre datos demográficos, hábitos alimentarios, cambios de estilo de vida y de comportamiento, imagen corporal, prejuicio experimen-tado y aumento de peso	10 pacientes	A pesar de una evaluación preliminar por los pares, el miedo al aumento de peso y la percepción del propio cuerpo fueron los principales puntos observados

Al-Najim, (2017)	Food Intake and Eating Behavior After Bariatric Surgery	PUBMED	Trabajo de revisión de la literatura sobre el comportamiento hacia la comida después de la cirugía bariátrica	Artículo original	Los factores que intervienen en la adherencia o no a la dietoterapia dependen, en gran medida, de factores hormonales y biopsicosociales.
Lee et al. (2017)	Food for Thought: Reward Mechanisms and Hedonic Overeating in Obesity.	PUBMED	Narrativa sobre la vida hedónica de las personas obesas y su relación con la comida	Artículo original	Un mejor conocimiento del comportamiento hedónico de las personas obesas puede traernos mejores resultados en el control del peso.
Herpertz et al. (2017)	Psychosomatic and Psychosocial Questions Regarding Bariatric Surgery: What Do We Know, or What Do We Think We Know?	PUBMED	Revisión narrativa de artículos sobre lo que sabemos o creemos saber sobre los efectos psíquicos de la cirugía bariátrica	Artículo original	Aunque todavía sabemos poco para definir para qué paciente será beneficiosa la cirugía, los resultados son en su mayoría buenos.
Autor	**Título**	**Base de datos**	**Tipo de estudio**	**Muestra**	**Resultados relevantes**
Generali et al. (2018)	Personality Traits and Weight Loss Surgery Outcome	PUBMED	Trabajo de revisión sobre aspectos implicados en los rasgos de personalidad y pérdida de peso después de la cirugía	25 artículos	No está claro que los factores del tipo de personalidad puedan realmente alterar los resultados de la pérdida de peso en la cirugía bariátrica.
Brode et al. (2019)	Problematic Eating Behaviors and Eating Disorders Associated with Bariatric Surgery	PUBMED	Artículo original escrito a partir de 68 artículos que tratan sobre el comportamiento alimentario antes y después de la cirugía bariátrica	Artículo original	Aunque ya mostraban una conducta alimentaria desfavorable antes de la cirugía, esto todavía tiene un buen resultado en los cambios de comportamiento hacia la comida
Conceição. (2019)	Disordered eating after bariatric surgery: clinical aspects, impact on outcomes, and intervention strategies	PUBMED	Comportamiento de pastoreo en la dieta como causa de pérdida de control y aumento de peso. Revisión de 36 artículos	Artículo original	Se recomienda un vocabulario sencillo a la hora de abordar al paciente obeso, además de explicaciones claras sobre el tipo de dieta y comportamiento
Raman et al. (2020)	The Clinical Obesity Maintenance Model: A Theoretical Framework for Bariatric Psychology	PUBMED	Se ha propuesto un modelo reciente: "Clinical Obesity Maintenance Model (COMM)". Este modelo fue discutido y analizado	Artículo original	Para obtener una mejor respuesta postoperatoria, necesitamos conocer mejor los diferentes fenotipos que existen

Yeo et al. (2021)	The impact of impulsivity on weight loss after bariatric surgery: a systematic review	PUBMED	Estudio que analiza el comportamiento impulsivo como posible causa del aumento de peso tras la cirugía bariátrica	10 estudios con 1246 pacientes	De hecho, la impulsividad puede ser un factor negativo para el control del peso, pero los pacientes con estados impulsivos pueden beneficiarse
Newman et al. (2021)	Psychosocial interventions to reduce eating pathology in bariatric surgery patients: a systematic review	PUBMED	Estudio de revisión sistemática para ensayos psicosociales controlados aleatorios	50 artículos	Se necesitan estudios longitudinales adicionales para una mejor comprensión del tema

Autor	Título	Base de datos	Tipo de estudio	Muestra	Resultados relevantes
González, et al. (2021)	Creencias en obesidad y cirugía bariátrica: análisis de contenido para diseñar una escala	SCIELO	Trabajo analítico longitudinal mediante cuestionario estructurado	22 pacientes	Las mujeres que tienen menos apoyo social y las que pasaron por situaciones negativas reportaron peores resultados

Tabla 3: Palabras clave: Postoperatorio de cirugía bariátrica (9 artículos)

Autor	Título	Base de datos	Tipo de estudio	Muestra	Resultados relevantes
Soares et al. (2017)	Práticas alimentares de pacientes em pós-operatório de cirurgia bariátrica: revisão integrativa	LILACS	Síntesis de artículos relacionados con el tema, disponibles en PUBMED, Science Direct, LILACS, Portal de Periódicos CAPES y SCIELO, considerando autores, año de publicación, objetivos, instrumentos utilizados para la recolección de datos y principales hallazgos	13 artículos de revisión	El trabajo lleva a la conclusión de que el equipo de nutrición y psicología tienen que caminar juntos para orientar a los pacientes en el postoperatorio de la cirugía bariátrica
Pizato et al. (2017)	Effect of Grazing Behavior on Weight Regain Post-Bariatric Surgery: A Systematic Review	PUBMED	Revisión sistemática realizada en 2017 en las bases de datos MEDLINE, EMBASE, Cochrane, LILACS, Scopus, Web of Science, Google Scholar, ProQuest	994 artículos	El comportamiento de pastoreo en algunos pacientes puede ser una razón para el aumento de peso, pero se necesitan más estudios

			Dissertation & Theses, e Open Grey		
Ivezaj et al. (2017)	Food addiction and bariatric surgery: a systematic review of the literature	PUBMED	Revisión de la litaratura con las bases PUBMED y Scopus databases	19 artículos	Necesitamos más estudios para determinar si la adicción a la comida puede ser un factor en el aumento de peso después de la cirugía bariátrica
Autor	**Título**	**Base de datos**	**Tipo de estudio**	**Muestra**	**Resultados relevantes**
Belo et al. (2018)	Predictors of poor follow-up after bariatric surgery	SCIELO	Estudio de cohortes retrospectivo para evaluar la adherencia de los pacientes al equipo multidisciplinario	559 pacientes	El análisis permitió concluir que el seguimiento de los pacientes disminuye con el tiempo, con una mayor reducción para aquellos que eran más obesos
Nancarrow et al. (2018)	The Role of Attachment in Body Weight and Weight Loss in Bariatric Patients	PUBMED	Estudio prospectivo, observacional y transversal	195 pacientes	El apego no se relacionó con el aumento de peso postoperatorio o, incluso, con la falta de adherencia al tratamiento en comparación con el grupo control
Kaouk et al. (2019)	Modifiable factors associated with weight regain after bariatric surgery: a scoping review	PUBMED	Estudio de revisión sistemática en las bases MEDLINE, Google Scholar, Cochrane, National Collaborating Centre for Methods and Tools (NCCMT) e Practice-based Evidence in Nutrition (PEN) incluyendo articulos de 1990 a 2017	22 estudios	Las herramientas de autocontrol y seguimiento de equipos multidisciplinarios pueden ser la clave para el control exitoso del peso en pacientes postoperados
Wong et al. (2020)	Change in emotional eating after bariatric surgery: systematic review and meta-analysis	PUBMED	Se utilizaron análisis sistemáticos y metanálisis con el método PRISMA	23 artículos	A medio y corto plazo, la cirugía bariátrica puede controlar el "alimento emocional", pero a largo plazo este beneficio se va diluyendo con el tiempo
Cassin et al. (2020)	Food Addiction Is Associated with Binge Eating and Psychiatric Distress among Post-Operative Bariatric Surgery Patients and May Improve in Response to Cognitive Behavioural Therapy	PUBMED	Investigación observacional de corte transversal realizada por telemedicina donde hubo mayor adherencia de los pacientes al programa de atención psicológica y alimentaria	100 pacientes	El estudio, a pesar de demostrar estadísticamente la validez del método, carece de un mayor número de participantes a mejorar

Autor	Título	Base de datos	Tipo de estudio	Muestra	Resultados relevantes
Istfan. et al. (2021)	Approach to the Patient: Management of the Post-Bariatric Surgery Patient With Weight Regain	PUBMED	Trabajo de "follow up" de 11 años de los pacientes operados. Con clasificación de riesgo de aumentar de peso. Revisión de la literatura	96 artículos	El estudio apunta a la necesidad de un seguimiento sistemático por parte del equipo multidisciplinario para un mejor resultado a largo plazo

IV. Resultados y Discusión

Entre los 34 artículos seleccionados para el estudio, luego de aplicar los criterios de inclusión y exclusión, se presentaron en las tablas 1, 2 y 3 las publicaciones seleccionadas que tuvieron mayor número de publicaciones donde se encuentra el año 2020, seguidas de las contenidas en los años 2018, 2019 y 2021. Sin embargo, el año 2017 tuvo menor frecuencia de estudios seleccionados, mientras que el año 2022 tuvo solo un artículo publicado hasta la fecha de cierre de las informaciones recogidas.

En la búsqueda de artículos en las Bases de Datos, 28 artículos fueron del índice MEDLINE/PUBMED, 3 de SCIELO y 3 de LILACS y, en relación a información y consultas en revistas, encontramos una gran variación entre publicaciones nacionales e internacionales, especialmente en lo que se refiere a método.

En la investigación hubo un mayor número de publicaciones internacionales, lo que reafirma el interés de toda la comunidad científica en la materia, principalmente por profesionales de la Psicología.

Las tablas 1, 2 y 3 presentadas anteriormente exponen una muestra diversificada de trabajos concerniente a los resultados finales. Pudimos observar y estudiar los diversos procesos psicopatológicos involucrados en el proceso de aumento de peso. El dato encontrado más relevante, y comentado reiteradamente, es la importancia del seguimiento del equipo multidisciplinar (Conceição, 2020).

En general, el estudio tuvo como objetivo describir las percepciones de las personas que se sometieron a la cirugía bariátrica y analizar los factores que afectan el resultado de la pérdida de peso en los que fueron operados, evaluando los impactos psicológicos en las personas que se sometieron a la cirugía bariátrica y los factores que conducen a la recuperación del peso.

Hubo diversidad en relación a los aspectos metodológicos, sin embargo, 8 artículos fueron estudios de campo del tipo prospectivo analítico, de los cuales 4 fueron metanálisis y los otros 4 fueron artículos originales; y 22 investigaciones de revisión sistemática de la literatura. Las investigaciones de tipo entrevistas estructuradas se incluyó en este trabajo como parte del análisis, pero solo aquellas realizadas en pacientes postoperatorios de cirugía bariátrica.

Evaluando las consideraciones de los autores, los juicios de valor están directamente relacionados con los sentimientos como la causa del fracaso en la cirugía bariátrica. Las personas comen por ansiedad, mastican por felicidad, incluso sin sentir hambre (Paula et al., 2017).

Los estudios realizados analizaron la relación entre imagen corporal y la pérdida de peso asociada a los síntomas depresivos en un grupo de cirugía bariátrica y encontraron que inicialmente los pacientes solo deseaban la pérdida total de peso, sin embargo no estaban preparados psicológicamente para el postoperatorio y comenzaron a sentirse negativamente afectados por la imagen actual, llevándolos a cuadros de deconstrucción de su propia imagen, no reconociéndose a sí mismos, provocando baja autoestima. Todo esto refuerza la importancia de los profesionales de la psicología en el equipo multidisciplinario para tratar a estos pacientes (Kaouk et al., 2019; Nancarrow et al., 2018; Al-Najim, 2017).

Incluso, siendo la cirugía bariátrica el procedimiento más realizado en el mundo para el control de peso —donde se observa que el control de la ansiedad es muy inferior al esperado a medio largo plazo, permitiendo la aparición de trastornos alimentarios severos como los trastornos alimentarios compulsivos, régimen de pastoreo y transformación de la dieta que puede influir negativamente en la pérdida y ganancia de peso después de dos años de la cirugía—; existe unanimidad en los estudios de que estos pacientes necesitan un seguimiento psicológico permanente en el postoperatorio (Pizato et al., 2017; Kaouk et al., 2019; Istfan et al., 2021).

Las observaciones realizadas en los trabajos también abordan el estudio de fenotipos cerebrales específicos que podrían representar anomalías en el proceso de recompensa y control como causa del aumento de peso en pacientes operados. Se necesitan más investigaciones para corroborar este estudio que parece prometedor (Lee et al., 2017; Linda, 2017; Aymery, 2020; Constant et al., 2020).

Se estudió el desequilibrio metabólico en pacientes operados, asociado a conductas compulsivas como causa del aumento de peso. El consumo de energía postoperatorio es inferior al esperado y esta brecha entre oferta y consumo lleva a creer en una adaptación metabólica. Tal condición puede ayudar a explicar otra razón para las pérdidas de peso insuficientes (Bussett et al., 2021).

También se estudió la impulsividad de estado o la acción impulsiva, donde se verificó que las terapias cognitivas comportamentales ayudan mucho en el control y que la impulsividad de rasgo puede, incluso, ser utilizada como aliada en el tratamiento psicológico y como herramienta de estímulo para la actividad física en el postoperatorio (Kouk et al., 2019; Yeod et al., 2021).

V. Conclusiones

Este trabajo tuvo la intensión de aumentar el conocimiento sobre el tema sin ningún conflicto de intereses. Llevando el debate a los posibles factores que conducen a los pacientes sometidos a cirugía bariátrica a aumentar de peso. Es importante recalcar que los datos encontrados en estudios de varios países señalan, de manera inequívoca, que la ausencia de un equipo multidisciplinario en el postoperatorio es el gran villano. El abandono del tratamiento y el acompañamiento a largo plazo se identificó como la principal razón para la recuperación de peso.

Factores asociados como los trastornos alimentarios presentes en los pacientes, se vuelven más intensos y más difíciles de controlar cuando el paciente abandona el acompañamiento clínico. Se encuentran diferentes perfiles psicológicos en los grupos de pacientes estudiados y que cuanto más obesos y más prolongado es el inicio de la obesidad, más probable es que aumenten de peso y presenten trastornos alimentarios en el posoperatorio tardío, sobre todo sin un adecuado seguimiento multidisciplinario.

La vida actual está llena de exigencias y de normas instituidas por la propia vida en comunidad. Los pacientes crean escudos y justificaciones para no hacer un seguimiento con el equipo, y sobre todo la atención a los aspectos psicológicos implicados en la génesis del aumento de peso. Pacientes perecieron en la medida en que abandonaron el acompañamiento.

La estructuración del equipo de nutrición, psicología y atención médica especializada es la clave para el control efectivo de la mayoría de los pacientes. Se necesitan más estudios que corroboren los aspectos aquí planteados, por ello nos parece bastante relevante en el tema la necesidad de mantener el seguimiento psicológico y el equipo multidisciplinario en el control de la recuperación de peso en los pacientes operados de cirugía bariátrica.

References Références Referencias

1. Alexandrou, A., Sakarellos, P., Davakis, S., Vailas, M., Dimitriou, N., Papalampros, A., Schizas, D., Charalabopoulos, A. y Felekouras, E. (2022). Revision of Roux-en-Y Gastric Bypass for Inadequate Weight Loss or Weight Regain. *In vivo*.; 36(1): 30-39. https://pubmed.ncbi.nlm.nih.gov/34972697/
2. Al-Najim, W., Docherty, N. G. y Le Roux, C. W. (2018). Food Intake and Eating Behavior after Bariatric Surgery. *Physiological reviews*; 98(3): 1113-1141 https://pubmed.ncbi.nlm.nih.gov/29717927/
3. Athanasiadis, D. I., Martin, A., Kapsampelis, P., Monfared, S. y Stefanidis, D. (2021). Factors associated with weight regain post-bariatric surgery: a systematic review. *Surg Endosc*; 35(8):4069-4084. https://pubmed.ncbi.nlm.nih.gov/33650001/
4. Bardal, A. G., Ceccatto, V. y Mezzomo, T. R. (2016). Fatores de risco para recidiva de peso no pós-operatório tardio de cirurgia bariátrica. *Scientia médica,* 26(4), p. 10. https://www.researchgate.net/publication/309963236_Fatores_de_risco_para_recidiva_de_peso_no_pos-operatorio_tardio_de_cirurgia_bariatrica
5. Belo, G. Q. M. B., Siqueira, L.T., Melo Filho, D. A. A., Freimer, F., Ramos, V. P. y Ferraz, Á. A. B. (2018). Predictors of poor follow-up after bariatric surgery. *Revista do Colégio Brasileiro de cirurgiões. Rev. Col. Bras*. Cir. 2018; 45(2): e1779. https://www.scielo.br/j/rcbc/a/cKFtfwxHgMqrw3ngrgWtDXq/?lang=en
6. Benedetti, C. (2003). *De obeso a magro: A trajetória psicológica*. Ed. Vetor ISBN: 85-7585-029-6
7. Brasil. Ministério da Saúde (2020). Secretaria de Vigilância em Saúde. Secretaria de Gestão Estratégica e Participativa. Vigitel Brasil 2019: Vigilância de fatores de risco e proteção para doenças crônicas por inquérito telefônico. Ministério da Saúde. https://bvsms.saude.gov.br/bvs/publicacoes/vigitel_brasil_2019_vigilancia_fatores_risco.pdf
8. Brode, C. S. (2019). Problematic Eating Behaviors and Eating Disorders Associated with Bariatric Surgery. *Psychiatr Clin North Am*.42 (2):287-297. https://pubmed.ncbi.nlm.nih.gov/31046930/
9. Bryant, E. J., Malik, M. S., Whitford-Bartle, T. y Waters, G. M. (2019). The effects of bariatric surgery on psychological aspects of eating behaviour and food intake in humans. *Nutricion*. 1; 150: 104575. https://pubmed.ncbi.nlm.nih.gov/31875518/
10. Busetto, L., Bettini, S., Makaronidis, J., Roberts, C. A., Halford, J. C. G. y Batterham, R. L. (2021). Mechanisms of weight regain..*Eur J Intern Med.* 93:3-7. https://pubmed.ncbi.nlm.nih.gov/33461826/

11. Cassin, S., Leung, S., Hawa, R., Wnuk, S., Jackson, T. y Sockalingam, S. (2020). Food Addiction Is Associated with Binge Eating and Psychiatric Distress among Post-Operative Bariatric Surgery Patients and May Improve *Response to Cognitive Behavioural Therapy*. Nutrients. 23; 12(10):2905. https://pubmed.ncbi.nlm.nih.gov/32977459/
12. Chooi, Y. C, Ding, C. y Magnos, F. (2018). *Epidemiology of obesity. Metabolism*. 92:6-10. https://www.sciencedirect.com/science/article/abs/pii/S002604951830194X
13. Conceição, E. M., Mitchell, J. E., Pinto-Bastos, A., Arrojado, F., Brandão, I. y Machado, P. P. P. (2017) Stability of problematic eating behaviors and weight loss eating disorders 11 trajectories after bariatric surgery: A longitudinal observational study. Surgery for Obesity and Related Diseases. 13(6): 1063–1070. https://pubmed.ncbi.nlm.nih.gov/28209532/
14. Constant, A., Moirand, R., Thibault, R. y Val-Laillet, D. (2020) Meeting of Minds around Food Addiction: Insights from Addiction Medicine, Nutrition, Psychology, and Neurosciences. *Nutrients.* 12(11): 3564. https://www.ncbi.nlm.nih.gov/pmc/articles/PMC7699750/
15. Cornejo-Pareja, I., Molina-Vega, M., Gómez-Pérez, A. M., Damas-Fuentes, M. y Tinahones, F. J. (2021). Factors Related to Weight Loss Maintenance in the Medium-Long Term after Bariatric Surgery: A Review *J Clin Med*. 10(8): 1739 https://pubmed.ncbi.nlm.nih.gov/33923789/
16. De Zwaan, M., Enderle, J. y Wagner, S. (2011). Anxiet abd depression in bariatric surgery patients: a progressive follow-up study using structured clinical interviews. *Jornal of Affective Disorders*. 133(1-2): 62-68. https://www.sciencedirect.com/science/article/abs/pii/S016503271100108X
17. Duarte-Guerra, L. S., Coelho, B. M., Santo, M. A. y Wang, Y. P. (2015). Psychiatric disorders among obese patients seeking bariatric surgery: results of structured clinical interviews. *Obesity Surgery*.; 25(5): 830-837. https://pubmed.ncbi.nlm.nih.gov/25358821/
18. El Ansari, W. y Elhag, W. (2021). Weight Regain and Insufficient Weight Loss after Bariatric Surgery: Definitions, Prevalence, Mechanisms, Predictors, Prevention and Management Strategies, and Knowledge Gaps-a Scoping Review. Obes Surg.; 31(4): 1755-1766. https://pubmed.ncbi.nlm.nih.gov/33555451/
19. Franques, A. R. M. y Arenales-Loli. (2011). Novos corpos, novas realidades. Reflexões sobre o pós-operatório da cirurgia da obesidade. *Ed. Vetor* ISBN: 98-85-7585-622-2
20. Generali, I. y De Panfilis, C. (2018). Personality Traits and Weight Loss Surgery Outcome. *Curr Obes Rep*.; 7(3): 227-234. https://pubmed.ncbi.nlm.nih.gov/30051313/
21. González, M. V. y Rodríguez, M. A. (2019) Creencias en obesidad y cirugía bariátrica: análisis de contenido para diseñar una escala. *Revista de Psicología PUCP)* Volume 39, Nº 1, pp. 253-287. https://revistas.pucp.edu.pe/index.php/psicologia/article/view/23117
22. Grilo, C. M., Ivezaj, V., Duffy, A. J. y Gueorguieva, R. (2021). Randomized Controlled Trial of Treatments for Loss-of-Control Eating Following Bariatric Surgery. *Obesity* (Silver Spring); 29(4): 689-697. https://pubmed.ncbi.nlm.nih.gov/33694287/
23. Herpertz, S. Psychosomatic and Psychosocial Questions Regarding Bariatric Surgery: What Do We Know, or What Do We Think We Know? (2017). *Psychosom Med Psychother*. 2017 Dec; 63(4): 344-369. https://pubmed.ncbi.nlm.nih.gov/29214946/
24. Hruby, A. y Hu, F. B. (2015). The Epidemiology of obesity: a big Picture. Pharmacoeconomics,. 33 (7): 673-689. https://link.springer.com/article/10.1007/s40273-014-0243-x
25. Ivezaj, V. (2019). Comment on: A modified inpatient eating disorders treatment protocol for post-bariatric surgery patients: Patient characteristics and treatment response. *Surgery for Obesity and Related Diseases.*; 15(12): e37–e39. https://www. sciencedirect.com/science/article/abs/pii/S1550728919303223
26. Istfan, N. W., Lipardia, M., Anderson, W. A., Hess, D. T. y Appovian, C. M. (2021). Approach to the Patient: Management of the Post-Bariatric Surgery Patient With Weight Regain. *J Clin Endocrinol Metab*.; 106(1): 251-263. https://academic.oup.com/jcem/article-abstract/106/1/251/5942999
27. Ivezaj, V. Food addiction and bariatric surgery: a systematic review of the literature. (2017). *Obes Rev*.; 18(12): 1386-1397. https://pubmed.ncbi.nlm.nih.gov/28948684/
28. Kaouk, L., Hsu, A. T., Tanuseputro, P. y Jessri, M. (2019). Modifiable factors associated with weight regain after bariatric surgery: a scoping review. F1000Res. 2019 May 3; 8:615. https://pubmed.ncbi.nlm.nih.gov/32983412/
29. Kortchmar, E., Meighi, M. A. B., Conz, C. A., Jesus, M. C. P. y Oliveira, D. M. (2018). Reganho de peso após a cirurgia bariátrica: um enfoque da fenomenologia social, Volume 31, Nº 4, pp. 417-422. https://www.scielo.br/j/ape/a/5zSPRMygkJLTFvBf4ZwjDHr/?lang=pt#:~:text=A%20viv%C3%AAncia%20de%20reganho%20de,e%20do%20conhecimento%20em%20sa%C3%BAde.
30. Lee, P. C. y Dixon, J. B. Food for Thought: Reward Mechanisms and Hedonic Overeating in Obesity. (2017). *Curr Obes*; 6(4): 353-361. https://pubmed.ncbi.nlm.nih.gov/29052153/
31. Macedo, C. O, Cardoso, R. F. A. y Dias, D. A. M. (2019). Transtornos alimentares em pacientes pré e pós bariátricos: uma revisão da literatura. *Revista*

Do Colégio Brasileiro de Cirurgiões, 45(60). https://repositorio.uniceub.br/jspui/bitstream/prefix/14583/1/Rafa%20e%20Cec%C3%ADlia.pdf

32. Marchesini, S. D. y Antunes, C. M. (2017) A percepção do corpo em pacientes bariátricos e a experiência do medo de reganho de pêso / Body perception and fear of weight regain in bariatric patients *Interaçao psico; 21(2): 127-136,*. https://pesquisa.bvsalud.org/portal/resource/pt/biblio-1021297
33. Meany, G., Conceição, E. y Mitchell, J. E. (2014) Binge eating, binge eating disorder anloss of control eating: effects on weigth outcomes after bariatric surgery. European Eating Disorders Review.; 22(2); 87-91. https://pubmed.ncbi.nlm.nih.gov/24347539/
34. Moura, G. V, Sousa, M. C y Lima, C. H. R. (2021). Pós-Operatório De Cirurgia Bariátrica- Uma Revisão Integrativa Da Literatura. *RECIMA - Revista Científica Multidisciplinar,* 12(4), pp. 4-18.
35. Nancarrow, A., Hollywood, A., Ogden, J. y Hashemi, M. (2018) The Role of Attachment in Body Weight and Weight Loss in Bariatric Patients. *Obes Surg*.; 28(2): 410-414. https://pubmed.ncbi.nlm.nih.gov/28681263/
36. Nascimento, J. W. G. (2019). Transtorno do uso de álcool em pacientes submetidos a cirurgia bariátrica. *São Paulo; HSPM;* LILACS, Coleciona SUS, Sec. Munic. Saúde SP | ID: biblio-1248297. https://pesquisa.bvsalud.org/portal/resource/pt/biblio-1248297
37. Newman, A. K. R., Herbozo, S., Russel, A., Eisele, H., Zasadzinski, L., Hassan, C. y Sanchez-Johnsen, L. (2021). Psychosocial interventions to reduce eating pathology in bariatric surgery patients: a systematic review. *J Behav Med*. 2021 Jun; 44(3): 421-436. https://pubmed.ncbi.nlm.nih.gov/33580454/
38. Paul, P., van der Heiden, C. y Heik, H. W. (año) Cognitive behavioral therapy and predictors of weight loss in bariatric surgery patients *Curr Opin Psychiatry*; 30(6): 474-479. https://pubmed.ncbi.nlm.nih.gov/28795980/
39. Paula, L. A., Matos, C. S., Figueiredo, M. D. y Radominski, R. B. (2017). Avaliação tipológica e psicodinâmica de paciente pós-bariátrica. *Pluralidades em Saúde Mental*, 6(2), 85-96. https://revistapsicofae.fae.edu/psico/article/view/139
40. Pizato, N., Botelho, P. B., Gonçalves, V. S. S., Dutra, E. S. y de Carvalho, K. M. B. (2017). Effect of Grazing Behavior on Weight Regain Post-Bariatric Surgery: A Systematic Review. *Nutrients*; 9(12): 1322. https://www.mdpi.com/2072-6643/9/12/1322
41. Raman, J., Spirou, D., Jahren, L. y Eik-Nes, T. T. (2020). The Clinical Obesity Maintenance Model: A Theoretical Framework for Bariatric Psychology. Front Endocrinol (Lausanne) 2020, Aug: 14; 11:563. https://www.frontiersin.org/articles/10.3389/fendo.2020.00563/full
42. Sala, M., Haller, D. L. y Laferrère, B. (2017) Predictors of attrition before e after bariatric surgery. *Obesity surgery*. 27(2): 548-551. https://link.springer.com/article/10.1007/s11695-016-2510-8
43. Sarwer, D. B., Allison, K. C., Wadden, T. A., AShare, R., Spitzer, J. C., McCuen-Wurst, C., LaGrotte, C., Williams, N. N., Edwards, M., Tewksbury, C. y Wu, J. (2019). Psychopathology, disordered eating, and impulsivity as predictors of outcomes of bariatric surgery. *Surg Obes Relat Dis*. 2019 Apr; 15(4):650-655. https://pubmed.ncbi.nlm.nih.gov/30858009/
44. Senegal, A., Kussunoki, D. K. y Freire, C. C. (2021). Cirurgias bariátricas e metabólicas. Tópicos de psicologia e psiquiatria. *Ed.Rúbio*. Rio de Janeiro, ISBN: 978-65-88340-05-9. pp. 20-30.
45. Sociedade Brasileira de Endocrinologia e Metabologia (2020). SBEM. http://www.sbemsp.org.br
46. Shukla, A. P., He, D., Saunders, K. H., Andrew, C. y Aronne, L. J. (2018). Current concepts in management of weight regain following bariatric surgery. *Expert Rev Endocrinol Metab*; 13(2):67-76. https://www.tandfonline.com/doi/abs/10.1080/17446651.2018.1447922?journalCode=iere20
47. Soares, J. M., Micheletti, J., Oliveira, M. L., Silva, A. G. y Cavagnari, M. A. V. (2017). Práticas alimentares de pacientes em pós-operatório de cirurgia bariátrica: revisão integrativa / Food practices of patients in postoperative surgery of bariatric surgery: integration review *Braspen J; 32(3): 282-287, jul-set.* https://pesquisa.bvsalud.org/portal/resource/pt/biblio-906072
48. Urrútia, G., & Bonfill, X. (2010). Declaración PRISMA: Una propuesta para mejorar la publicación de revisiones sistemáticas y metaanálisis. *Medicina clínica*, *135*(11), 507-511.Van Hout, G. C., Verschure, S. K. y Van Heck, G. L. (2005). Psychosocial predictors of success following bariatric surgery. *Obesity Surgery*.; 15(4): 552-560. https://link.springer.com/article/10.1381/096089205 3723484
49. Wolfe, M., De Biasi, A., Carmody, J., Fulmer, T. y Auerbach, J. (2021). Expanding Public Health Practice to Address Older Adult Health and Well-being. J Public Health Manag. Pract; 27(5): E189-E196. https://pubmed.ncbi.nlm.nih.gov/32956295/
50. Wong, L.Y., Zafari, N., churilov, L., Stammers, L., Price, S., Ekinci, E.I. y Sumithran, P. (2020). Change in emotional eating after bariatric surgery: systematic review and meta-analysis *BJS Open*.; 4(6): 995-1014. https://pubmed.ncbi.nlm.nih.gov/32671964/.

51. Yeo, D., Toh, A., Yeo, C., Low, G., Yeo, J. Z., Aung, M. O., Rao, J. y Kaushal, S. (2021).The impact of impulsivity on weight loss after bariatric surgery: a systematic review. Eat Weight Disord; 26(2): 425-438. https://pubmed.ncbi.nlm.nih.gov/32232777/

Global Journal of Medical Research: I
Surgeries and Cardiovascular System
Volume 22 Issue 2 Version 1.0 Year 2022
Type: Double Blind Peer Reviewed International Research Journal
Publisher: Global Journals
Online ISSN: 2249-4618 & Print ISSN: 0975-5888

Subdiaphragmatic Abscess: Complication of Emergency Laparotomy

By Dr. Abhijeet Dilip Kharche, Dr. Sriranjani Iyer & Dr. Saileshwar Natarajan

Abstract- Intra-abdominal abscesses usually occur following any intra-abdominal surgery, trauma, Gastrointestinal infection or intestinal perforation. In particular, the diagnosis of sub-phrenic collection can be notoriously difficult. This fact is expressed by the well-known aphorism: 'Pus somewhere, pus nowhere else, pus under the diaphragm'. Sub-diaphragmatic abscesses form between the diaphragm and abdominal organs, such as the liver and spleen. Depending on the severity of the sub-diaphragmatic abscess and the cause, treatment method may vary for each case. The abscess may be treated with early percutaneous drainage and empiric intravenous antibiotics. When dealing with post-operative persistent pyrexia that does not react to antibiotics, surgeons must always be careful, and the likelihood of a sub-diaphragmatic abscess must always be considered. If not treated, thoracic and abdominal complications may prevail, in rare cases, death.We present a case of sub-diaphragmatic abscess in a patient with a perforated duodenal ulcer treated by ultrasound-guided percutaneous drainage with a good outcome.

Keywords: *sub-phrenic, abscess, drainage, post-operative.*

GJMR-I Classification: *LCC Code: AC4*

Strictly as per the compliance and regulations of:

Subdiaphragmatic Abscess: Complication of Emergency Laparotomy

Dr. Abhijeet Dilip Kharche [α], Dr. Sriranjani Iyer [σ] & Dr. Saileshwar Natarajan [ρ]

Abstract- Intra-abdominal abscesses usually occur following any intra-abdominal surgery, trauma, Gastrointestinal infection or intestinal perforation. In particular, the diagnosis of sub-phrenic collection can be notoriously difficult. This fact is expressed by the well-known aphorism: 'Pus somewhere, pus nowhere else, pus under the diaphragm'. Sub-diaphragmatic abscesses form between the diaphragm and abdominal organs, such as the liver and spleen. Depending on the severity of the sub-diaphragmatic abscess and the cause, treatment method may vary for each case. The abscess may be treated with early percutaneous drainage and empiric intravenous antibiotics. When dealing with post-operative persistent pyrexia that does not react to antibiotics, surgeons must always be careful, and the likelihood of a sub-diaphragmatic abscess must always be considered. If not treated, thoracic and abdominal complications may prevail, in rare cases, death.We present a case of sub-diaphragmatic abscess in a patient with a perforated duodenal ulcer treated by ultrasound-guided percutaneous drainage with a good outcome.

Keywords: sub-phrenic, abscess, drainage, post-operative.

I. Introduction

Intra-abdominal abscesses are common after surgery, trauma, severe gastrointestinal infection, intestinal perforation, or acute pancreatitis [1, 2]. Thirty percent of episodes are related to inflammatory illnesses of the abdominal organs caused by gastric/duodenal perforation, twenty percent to the liver/biliary system, and one-third to appendicitis [1, 3]. Between the diaphragm and abdominal organs like the liver and spleen, sub-diaphragmatic abscesses occur. Surgical drainage, percutaneous drainage, and endoscopic drainage are all options for abscess drainage.

The mortality rate of a sub-diaphragmatic abscess is significant, and failing to recognize or postpone treatment might be harmful to the patient [4]. The sub-diaphragmatic purulent collection has a significant mortality rate, and if undetected or delayed, it can lead to intra-thoracic problems [5]. Fever with chills and rigors, upper quadrant pain, and leukocytosis are some of the symptoms. The best way to diagnose a sub-phrenic abscess is to use imaging, particularly a CT scan [6].

The patient is at risk of developing chronic episodes of unrelenting fever, sepsis, peritonitis, and death unless treated. Early percutaneous drainage and empiric intravenous antibiotics may be enough to treat the abscess. Surgeons must always be cautious when dealing with post-operative persistent pyrexia that does not respond to antibiotics, and the possibility of a sub-diaphragmatic abscess must always be addressed.

We report a case of sub-diaphragmatic abscess in a post-operative case of perforated duodenal ulcer treated with ultrasound guided percutaneous drainage, with a favorable post-treatment course.

II. Case Report

A 48-year-old male patient came with chief complaints of pain in the abdomen, breathing difficulties, fever, loss of appetite since four days. Patient is a post-operative day 14 case of pre-pyloric perforation and was previously explored and managed by modified graham's patch repair. His pelvic drain was removed on post-operative day 3 and the abdominal drain in Morrison's pouch was removed on post-op day 5 with minimal to nil drain output. The patient was discharged in a healthy state on post-op day 7 with no complaints. On routine post discharge follow up day 3, he had no complaints and his general and per abdomen examination were satisfactory. On post-operative day 11, patient started experiencing pain in right hypochondrium and fever. Pain was dull aching, and progressively increasing in nature with spikes of low-grade fever throughout the day. Gradually he further developed breathing difficulties and loss of appetite. Patient is a known chronic cigarette smoker. Patient did not have any comorbidities.

At admission, on general physical examination, patient was febrile (38.6 degrees centigrade) with tachycardia (130/min), patient had right hypochondriac tenderness with localized guarding with a palpable lower margin of liver, Respiratory system showed decreased breath sounds on the right lower zone of the chest on auscultation. Per-Rectal examination showed no abnormalities. After initial resuscitation with Intravenous fluids, patient was investigated with routine laboratory investigations which revealed a marked inflammatory response, with a white blood cell count of 14,500 cells/

Author α: Junior Resident, Department of General surgery, Rajiv Gandhi Medical College, Thane, Mumbai, Maharashtra, India.
Corresponding Author σ: Senior Resident, Department of General surgery, Rajiv Gandhi Medical College, Thane, Mumbai, Maharashtra, India. e-mail: sriranjani1993@gmail.com
Author ρ: Professor and Head, Department of General surgery, Rajiv Gandhi Medical College, Thane, Mumbai, Maharashtra, India.

μl with a predominant neutrophilic differential count. A chest and abdominal roentgenogram revealed minimal right sided pleural effusion. An Abdomino-pelvic ultrasonography was then performed which revealed a right sided sub-phrenic collection of about 1500 cc pushing liver down with minimal interbowel free fluid, most likely suggestive of infective etiology, right sub-phrenic abscess.

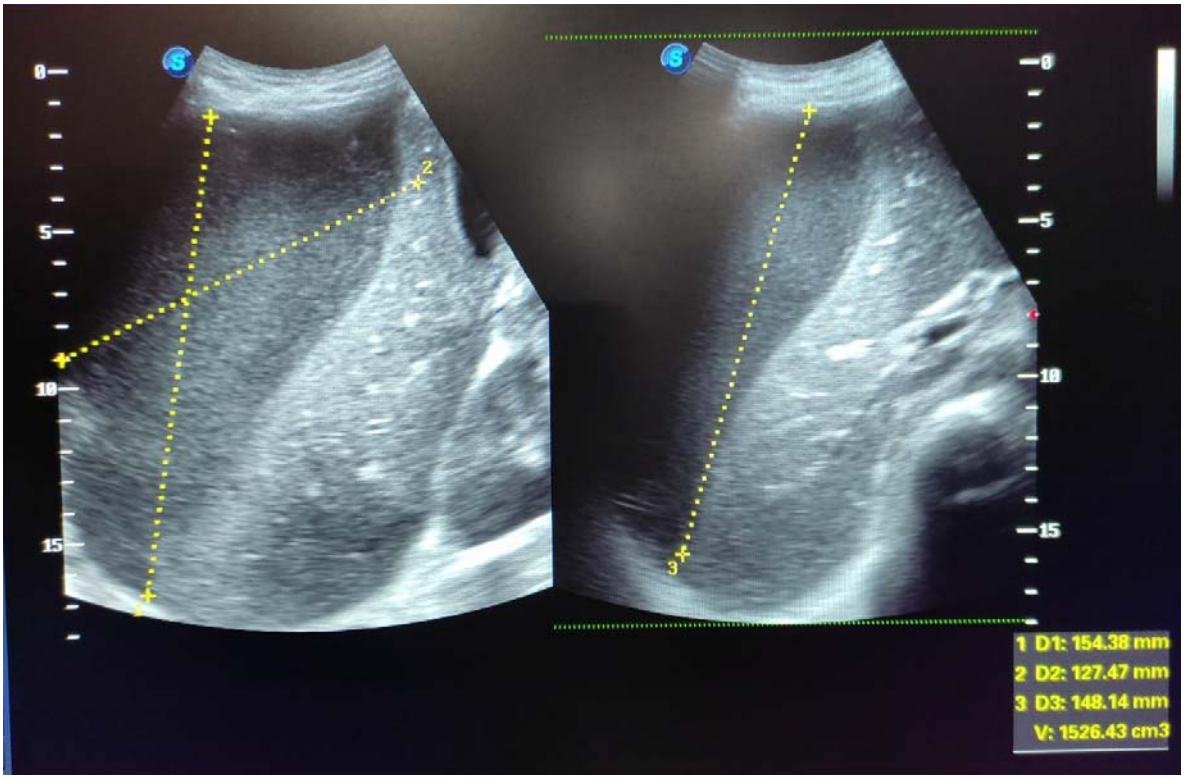


Figure 1: Ultrasonography of abdomen showing 1500cc right sub-phrenic collection pushing liver down.

The Patient was started on third-generation cephalosporin antibiotics, metronidazole, and amikacin. An Emergency percutaneous draining pigtail catheter of 16 F was inserted in the suprahepatic right subdiaphragmatic space between 11th and 12th intercostal space and fixed under ultrasound guidance, and 1100 ml frank pus was drained. Microbiological and biochemical samples for testing were collected and pus sample was sent for culture and antibiotic sensitivity. The residual pus got drained over the later 2 days. A repeat chest and abdominal roentgenogram and abdominopelvic ultrasonography were done on day 3 of percutaneous catheterization, to look for any residual collection. With no radiological or clinical evidence of any sub-phrenic collection, the pigtail catheter was removed after 3 days. The Post-procedure course was uneventful, and patient improved clinically. The patient was later discharged and followed up and managed conservatively thereafter.

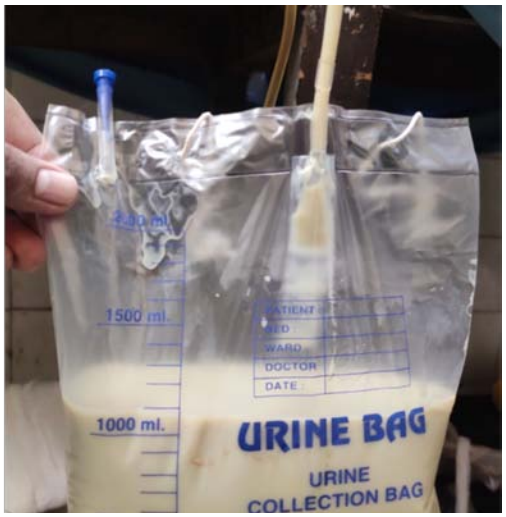


Figure 2 a and b: Pigtail catheter insertion in the right sub-phrenic space and collection of 1100cc pus.

Figure 3: Post-procedure roentgenogram of chest and abdomen showing right minimal pleural effusion and right-sided pigtail catheter in situ.

III. Discussion

The area between the diaphragm and the transverse colon and mesocolon is the sub-diaphragmatic zone. The liver further divides this region into suprahepatic and infrahepatic compartments. These sub-diaphragmatic abscesses can progress to pleurisy with or without effusion, empyema, lung abscess, and bronchial fistula, as well as peritonitis and mortality in rare cases.

The difficulties are exacerbated as the clinical picture is frequently obscured by the causative disease and prior operational intervention. Pain, fever, malaise, cough, or pleural effusion are common symptoms in patients with thoracic or abdominal symptoms. In any patient with unexplained fever, tachycardia, or leucocytosis, the likelihood of a localized intra-abdominal pus accumulation should be considered.

A perforated viscus or a distant extra-abdominal source, probably by hematogenous dissemination, might cause an abscess. Intraoperative contamination and anastomotic leakage are usually quickly disseminated throughout the peritoneal cavity, gathering in the left subphrenic area due to peritoneal fluid flow. According to Oschner and Graves' study, 31 percent of 3372 instances were caused by a ruptured appendix, and 29 percent were caused by a perforated stomach or duodenum [1]. Wetterfors discovered that 60% of his cases were related to previous surgery [7].

According to culture results, the organisms most typically found in a subdiaphragmatic abscess

were Staphylococcus, Streptococcus, E. coli, B. Proteus, and pseudomonas.

The relevance of radiological diagnostics in verifying and localizing the Subdiaphragmatic abscess is crucial. Few indications highly suggestive of a subphrenic collection include loss of diaphragmatic mobility and elevation of the diaphragm, pleural effusion, loss of posterior costophrenic angle in lateral view, gas or fluid beneath diaphragm, and enlargement of liver shadow.

The treatment technique for each patient must be determined based on the severity and origin of the subdiaphragmatic abscess. A single sufficient drainage using an extraserous technique may be all that is required in individuals with a single, accessible, well-localized abscess [8]. Sherman et al. (1969) found a 23 percent mortality rate in patients with drainage and an 80 percent mortality rate in those without drainage [9]. If the aspiration is done low down, with the needle pointing up towards the subphrenic spaces, the lung will not be damaged. When the diaphragm is raised, it adheres to the chest wall, allowing aspiration to be conducted safely without concern of injuring the lung or contaminating the pleura. For individuals with numerous abscesses, a transperitoneal technique should be used. An upper paramedian or a subcostal incision can be used to execute this procedure. The key to efficient care of a Subphrenic abscess is early detection and appropriate drainage under the influence of antibiotics.

IV. Conclusion

We experienced a case of sub-diaphragmatic abscess associated with a post-operative perforated duodenal ulcer that was cured by percutaneous drainage.

Since the advent of antibiotics, spontaneous subphrenic abscess has become less prevalent, but post-surgical occurence has become more common.

Declarations

Funding: No Funding sources

Conflict of interest: None declared

Ethical approval: Not required

References Références Referencias

1. Ochsner A, Graves AM. Subphrenic abscess: an analysis of 3,372 collected and personal cases. Ann Surg. 1933; 98(6): 961–90.
2. Minei JP. Abdominal abscesses and gastrointestinal fistulas. Gastroin-testinal and liver disease: patho-physiology/diagnosis/management. 2002: 431–37.
3. Christian MN. Rupture of a subphrenic abscess into the pericardium. Ann Surg. 1945; 129: 148–51.
4. T. Hau, J.R. Haaga and M.I. Aeder, Pathophysiology, diagnosis, and treatment of abdominal abscesses, Current Problems in Surgery, 10.1016/0011-3840(84)90021-2, 21, 7, (8-82), (1984).
5. Beye H.L. The thoracic complications of subdiaphragmatic infection. J. Thoracic Surg. 1932; 1: 655-662.
6. CT differentiation of subphrenic abscess and pleural effusion, ES Alexander, AV Proto and RA clark, American Journal of Roentgenology. 1983; 140: 47-51. 10.2214.
7. Wetterfors, J. Subphrenic abscess: clinical study of 101 cases. Acta chir. Scandinav., 1959, 117, 388-408.
8. Deck,K. B, and Berne,T. V. (1979). Selective management of subphrenic abscess. Arch. Surg. 114, 1165-1168.
9. Shermann,. J., Davis, J.R. and Jesseph, J.E. (1969). Subphrenic abscess: A continuing hazard. Amer. J. Surg. 117, 117-122.

Global Journal of Medical Research: I
Surgeries and Cardiovascular System
Volume 22 Issue 2 Version 1.0 Year 2022
Type: Double Blind Peer Reviewed International Research Journal
Publisher: Global Journals
Online ISSN: 2249-4618 & Print ISSN: 0975-5888

Treatment and Evolution of Appendicular Mucoceles in Six Cases

By Kouakou Ibrahim Anzoua, Bernadin Kouamé Kouakou, Mamadou Traoré, Ismael Kalou Leh BI Leh BI, Ahou Bernadette N'Dri, Serge Amos Ekra, Amos Kouakou, Inza Bamba, Akowendoand Roger Lebeau & Bamourou Diané

Abstract- *Purpose:* To report our experience in the management of appendicular mucoceles.

Method: Retrospective and descriptive study carried out in the Department of General and Digestive Surgery of the University Hospital of Bouaké.

Results: We recorded six cases of appendicular mucocele. The average age of onset was 53 years. The male sex predominated. Pain in the right iliac fossa was the predominant sign. The average duration of evolution was four months. Appendectomy was performed in four patients and appendectomy with partial excision of the coecum in one patient. Histologically, three patients had a simple mucocele, one had a mucinous cytadenoma and one had a cystadenocarcinoma. In the latter, the indication of a right hemicolectomy was recommended but the patient refused the operation. Morbidity was nil. The average follow-up time was 13 months, after which the patients were lost to follow-up.

Keywords: *mucocele-tumor-appendicectomy.*

GJMR-I Classification: *NLMC Code: WJ 768*

Strictly as per the compliance and regulations of:

Treatment and Evolution of Appendicular Mucoceles in Six Cases

Kouakou Ibrahim Anzoua [α], Bernadin Kouamé Kouakou [σ], Mamadou Traoré [ρ], Ismael Kalou Leh Bl Leh Bl [ω], Ahou Bernadette N'Dri [¥], Serge Amos Ekra [§], Amos Kouakou [χ], Inza Bamba [ν], Akowendoand Roger Lebeau [Θ] & Bamourou Diané [ζ]

Abstract- ***Purpose:*** **To report our experience in the management of appendicular mucoceles.**

Method: **Retrospective and descriptive study carried out in the Department of General and Digestive Surgery of the University Hospital of Bouaké.**

Results: **We recorded six cases of appendicular mucocele. The average age of onset was 53 years. The male sex predominated. Pain in the right iliac fossa was the predominant sign. The average duration of evolution was four months. Appendectomy was performed in four patients and appendectomy with partial excision of the coecum in one patient. Histologically, three patients had a simple mucocele, one had a mucinous cytadenoma and one had a cystadenocarcinoma. In the latter, the indication of a right hemicolectomy was recommended but the patient refused the operation. Morbidity was nil. The average follow-up time was 13 months, after which the patients were lost to follow-up.**

Conclusion: **The treatment of appendicular mucocele is surgical. The evolution and the prognosis are conditioned by the histological type, the surgical gesture and the peritoneal cytology.**

Keywords: mucocele-tumor-appendicectomy.

I. Introduction

Appendiceal mucocele (AM) or mucosecretory tumor of the appendix is a pathological entity referring to cystic dilatation of the appendiceal lumen, secondary to intraluminal accumulation of mucinous, gelatinous, or translucent secretions, which may involve the entire organ or a segment of it, most often distal [1].

This condition is rare. It is observed in 0.15 to 0.6% of appendectomies and represents 7% to 8% of appendicular tumors [2]. Its treatment ranges from simple appendectomy in benign forms to right hemicolectomy for cancer in malignant mucoceles [3].

The most serious complications are the risk of malignancy and peritoneal pseudomyxoma (PMP) in case of perforation [4,5]. The objective of this work was to report our experience in the management of appendiceal mucoceles.

Author σ ρ ω ¥ § χ ν Θ ζ: General and Digestive Surgery Department, Bouaké Teaching Hospital (Côte D'ivoire).
Corresponding Author α: Medical Doctor, General and Digestive Surgery Department, Bouaké Teaching Hospital.
e-mail: ankib7@yahoo.fr

II. Our Observations

Over an 11-year period from 2010 to 2020 we performed 2024 appendectomies. An anatomopathological examination of the surgical specimen was performed in 876 cases. This examination showed an appendicular mucocele in 6 cases (0.68%). We report below the observations of these 6 patients.

Observation 1

A 44-year-old patient with no prior history of any kind visited the surgical emergency room with right iliac fossa pain that had been evolving for three days. The patient had nausea but no transit disorders. On clinical examination, the temperature was 38.5°C, the general condition was preserved and there was pain and tenderness in the right iliac fossa. Clinically the diagnosis of appendicular syndrome was retained. The sedimentation rate was accelerated with figures of 50 at the first hour and 75 at the second hour. On the blood count, the white blood cell count was 10500/mm3. Abdominal ultrasound revealed pain in the right iliac fossa when the probe was passed, and a thick-walled non-compressible appendix. The diagnosis of appendicitis was made and the patient was operated on using the McBurney approach. Intraoperatively, an appendix measuring 8.5 cm x 5 cm with a point of increased volume was discovered. Appendectomy was performed. The postoperative course was simple and the patient was discharged at D3 postoperatively after resumption of transit and oral feeding.

Anatomopathological examination of the appendicular specimen (figure 1) showed a simple appendicular mucocele without any degenerative focus (figure 2, 3). The colonoscopy performed at 3 months was normal. The patient was lost to follow-up after 12 months.

Figure 1: Appearance of an appendicular mucocele after formalin fixation. Note the increased volume of the distal half of the appendix.

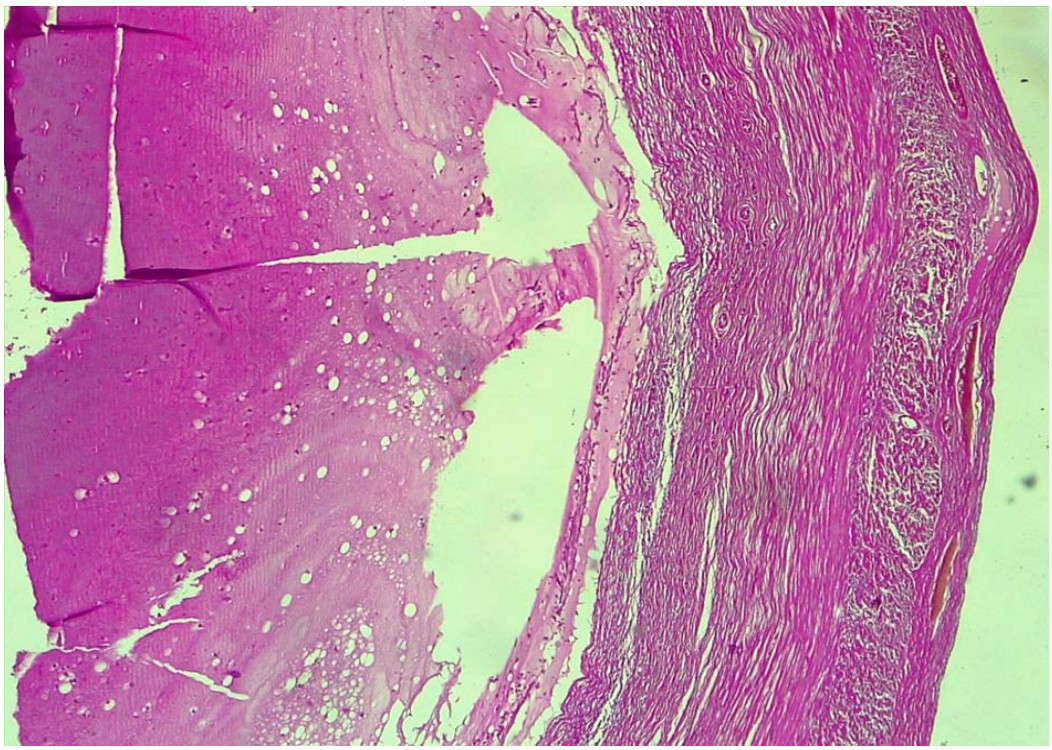


Figure 2: HE x 250: histological aspect of an appendicular mucocele showing a dilated lumen with abundant mucoid substance infiltrating the smooth muscle layers and serosa.

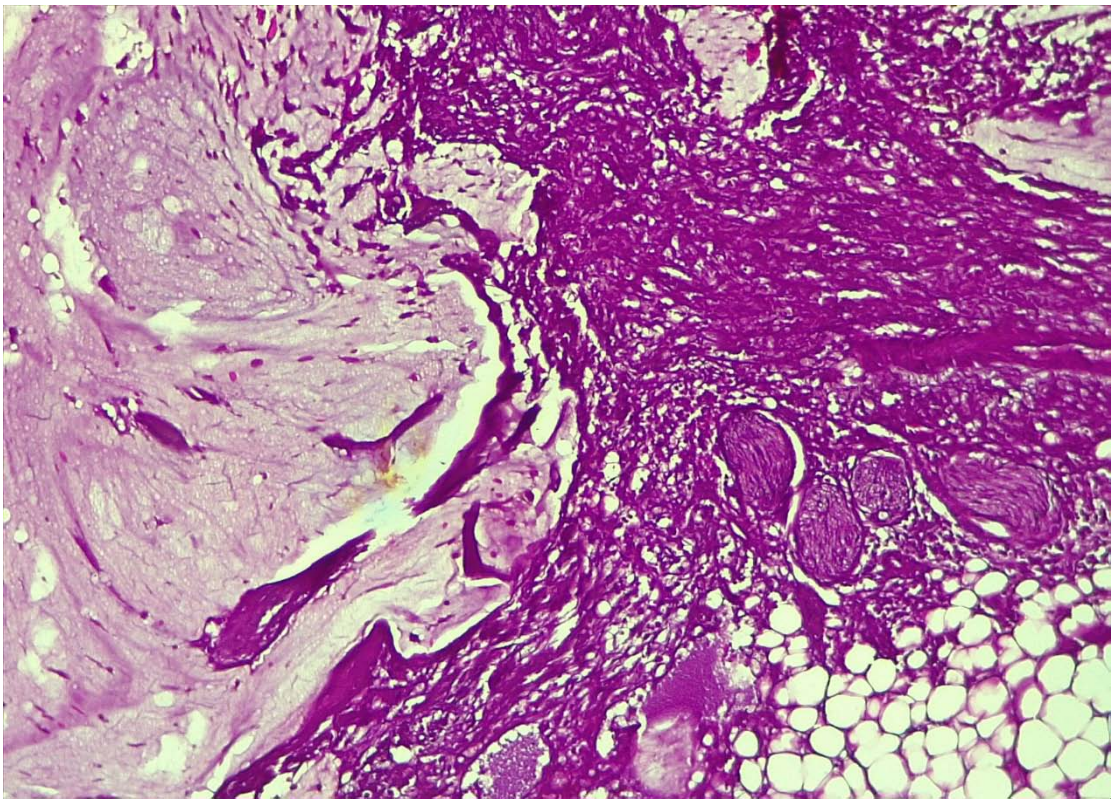


Figure 3: HE x 250: histological aspect of an appendicular mucocele showing in the periphery of the wall, in the peritoneum, mucus patches without tumor masses and malignant tumor cells.

Observation 2

A 63-year-old patient with no previous history consulted for a painful but non febrile mass in the right iliac fossa that had appeared three months earlier. The mass had progressively increased in size until it reached the present dimensions. There was no transit disorder (diarrhea, constipation) and no rectal bleeding. The physical examination revealed a painful right iliac fossa with a regular surface, poorly limited, fixed to the deep and superficial plane. On rectal examination, the lower pole of the mass could not be felt. Clinically, the diagnosis of colonic tumor was evoked. Colonoscopy could not be performed and tumor markers (CEA, CA 19-9) were not detected. The sedimentation rate was accelerated with figures of 45 at the first hour and 85 at the second hour. The white blood cell count was 13500/mm3. The C-reactive protein was increased to 200 mg/l. Abdominal ultrasound revealed a heterogeneous mass in the right iliac fossa, suggesting an abscess. The patient was operated by median laparotomy. When the abdomen was opened, there was no abscess in the right iliac fossa, but a large appendix measuring 15 cm x 7 cm, with a pedicle base on the cecum. On palpation of the colonic frame there was no tumor, there was no adenopathy in the abdomen, no ascites or mucus. The diagnosis of appendicular mucocele was evoked. An appendectomy with resection of the base of the cecum was performed. The postoperative course was simple and the patient was discharged at 5 days postoperatively after resumption of transit and oral feeding.

The anatomical-pathological examination showed a simple appendicular mucocele without any degenerative focus. Colonoscopy performed at 3 months postoperatively was normal. The patient was lost to follow-up after 6 months.

Observation 3

A 38-year-old G3P3 patient with no particular medical or surgical history consulted the surgical emergency room for right iliac fossa pain evolving for three days. The date of the last ones was known by the patient, there was no menstrual cycle disorder. The patient also complained of nausea and vomiting. The physical examination revealed pain and tenderness in the right iliac fossa, the temperature was 38.9°C. The rectal examination revealed pain at the top and right fingertips. The vaginal touch was normal. The sedimentation rate was 45 at the first hour and 70 at the second hour. The white blood cell count was 14500/mm3. The C-reactive protein was increased to 78mg/l. Abdominopelvic ultrasound showed a hypoechoic structure with a thickened wall suggesting a periappendicular abscess. The right uterine adnexa and uterus were normal. The patient was operated by laparotomy (Mc Burney). During the operation, an appendix measuring 8 cm long was discovered, enlarged in its proximal part and indurated in its median

part. The right uterine appendages were unremarkable. An appendectomy was performed (Figure 4). The postoperative course was simple and the patient was discharged at 2 days postoperatively.

Anatomopathological examination of the appendectomy specimen showed a mucinous cystadenocarcinoma without invasion of the appendicular base. There was no metastatic embolism in the vessels and no perineural envelopment. Pelvic ultrasound performed at three months post-op showed normal right and left uterine appendages. The colonoscopy performed at the same date was normal. The patient refused the proposed reintervention to perform a hemicolectomy. Tumor markers (CEA, CA 19-9 ca 125) were normal at 12 and 24 months. The last pelvic ultrasound done after 36 months was normal. She was subsequently lost to follow-up.

Figure 4: Appendectomy specimen for appendiceal mucocele: Note the swollen appearance of the appendix especially marked in its proximal half.

Observation 4

A 54-year-old patient was admitted to the emergency room with sudden onset right iliac fossa pain that had been evolving for 4 days with nausea but no transit disorders. On clinical examination, the temperature was 38.5°C, there was pain and tenderness in the right iliac fossa. Abdominal ultrasound was not performed. The sedimentation rate was accelerated with figures of 30 at the first hour and 50 at the second hour. The white blood cell count was 10300/mm3. The C-reactive protein was increased to 21mg/l. The diagnosis of acute appendicitis was evoked and the patient was operated. At laparotomy through McBurney's approach, an appendix measuring 9 cm x 5 cm was discovered. The appendectomy was performed (figure 5). When the appendix was cut, mucus was seen to be flowing. This fact necessitated the resection of the appendicular stump taking away the base of the appendix on the cecum. The postoperative course was simple and the patient was discharged on day 3.

The anatomical-pathological examination of the appendicular specimen showed a simple appendicular mucocele without any degenerative focus. Colonoscopy was not performed. The patient was lost to follow-up after the first postoperative consultation at one month postoperatively.

Figure 5: Appendectomy specimen. Note the uniformly dilated appearance of the appendix.

Observation 5

A 68-year-old patient with known hypertension and G6P6 menopausal disease consulted for right iliac fossa pain that had been present for 3 months. The pain was dull without radiations, there was no weight loss. Clinical examination revealed a firm right iliac fossa mass adherent to the deep plane. Pelvic touch was normal. Ultrasound examination showed a hypoechoic mass of digestive appearance, heterogeneous, independent of the right psoas muscle and the bladder, measuring 169 mm long and 80 mm in diameter, pushing the right adnexa posteriorly. There was no adenopathy and no ascites. Colonoscopy showed a decrease of the colonic lumen, the poor colonic preparation did not allow to affirm the presence of an intra luminal lesion (tumor). Tumor markers were normal. The rest of the biological work-up was also normal (blood glucose, blood count, prothrombin rate). An indication for laparotomy was given for a tumor of the cecum. During the operation, there was no colonic tumor and a large appendicular tumor was discovered. The mass was oblong, elongated and well limited, 17.5 cm in length and 7 cm in diameter, with a healthy base, but with an epiploic call and small intestines. There was no adenopathy, ascites or mucoid effusion in the abdominal cavity. The uterus and adnexa were normal. An appendectomy was performed. The postoperative course was simple and the patient was discharged at 8 days postoperatively. Anatomopathological analysis of the surgical specimen confirmed the diagnosis of appendicular mucocele without malignant cells, of mucinous cystadenoma type. Ultrasound of the abdomen done at 6 months was normal as was colonoscopy done at 12 months. Tumor markers could not be performed. The patient was lost to follow-up after 27 months.

Observation 6

A 55-year-old chronically constipated patient was accompanied by his parents in January 2019 for

late postprandial vomiting associated with altered general condition evolving around 05 months. He had no abdominal pain, cessation of matter and gas, hematemesis, melena, and rectorrhagia. The patient had anorexia, reported asthenia and weight loss with an estimated weight loss of 2% of the body weight (Formal weight: 87 kg Current weight 83kg). The conjunctiva were slightly colored, the blood pressure was 130/90 mmHg, the pulse was 80 beats/min and the respiratory rate was 20cycles/min. There was an abdominal tumefaction from the right para-umbilical region to the right flank. The mass was round, painless, firm, mobile and dull on percussion. On digital rectal examination the prostate appeared to be enlarged, and the fingernail brought back soft stools. The diagnosis of cystic tumor of the mesentery was evoked. Due to post prandial vomiting, an oesogastroduodenal fibroscopy was performed and revealed an erythematous fundic gastropaphy. Abdominopelvic CT scan showed a homogeneous liquid mass in favor of a mesenteric cyst corresponding to a giant cystic lymphangioma (Figures 6 and 7). Biologically, the hemoglobin level was 8.7 g/dL, the white blood cell count was 4600 and the platelets were 189000. Blood glucose was normal, as well as creatinine and prothrombin level (92%). Regarding tumor markers, CEA was 8ng/ and CA19-9 was 53 IU/ml. The patient was transfused and then operated on. Intraoperatively it was a large, firm, pearly white mass measuring 14 cm x 7 cm, located at the ileocaecal junction at the junction of the three caecal bands (Figure 8). The appendix was not seen. There was no adenopathy, no ascites. Palpation of the colonic frame did not reveal any tumor. We performed the removal of the mass (figure 9). The postoperative course was simple and the patient was discharged at D7 postoperatively. On anatomopathological examination it was an appendicular mucocele.

At 6 months post-op, the patient underwent a colonoscopy which was normal as were the tumor marker assays (CEA was 4.5ng/ml and CA19-9 was 17 IU/ml). Contacted by telephone in July 2021, the patient was doing well, and claimed to have regained his appetite and weight.

Figure 6: CT scan section showing the cystic mass with wall enhancement (thin arrow). Note the cyst on the lower pole of the right kidney (thick arrow).

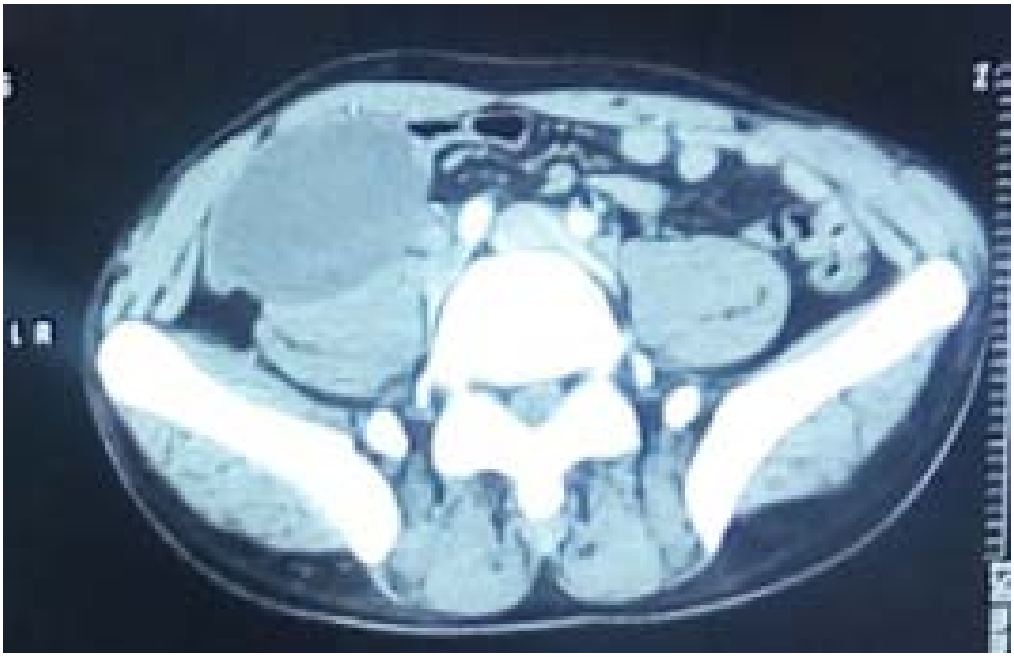


Figure 7: Scannographic section showing the cystic mass coming into contact with the psoas in the right iliac fossa.

Figure 8: Intraoperative findings: elongated pearly white mass located at the ileocaecal junction (ileum: left clamp and cecum: right clamp).

Figure 9: Appearance of an appendiceal mucocele after appendectomy. Note the pearly white oblong appendicular mass.

III. Discussion

Appendicular mucocele is a rare condition, observed in 0.2% to 0.7% of appendectomy specimens according to the literature [6-8]. The first Ivorian case seems to have been reported by Kouadio L et al in 2003 [9].

The treatment of appendiceal mucocele is surgical, balancing appendectomy in healthy tissue and right hemicolectomy. The surgical procedure can be conducted by laparotomy or laparoscopic surgery [10-12]. To prevent any risk of rupture of the appendicular mass, some authors perform the appendicular resection with automatic suture forceps [12-14]. Appendectomy is sufficient for a simple appendicular mucocele or a mucinous cystadenoma. When in doubt intraoperatively, some authors excise the caecal insertion of the appendicular base [12, 15], others perform a resection of the cecum, and still others perform a right hemicolectomy [16, 17].

In the present study, simple appendectomy was performed in five patients and excision of the caecal insertion of the appendicular base in one patient (observation 2). Intraoperatively, exploration of the colonic framework is important if the operation is performed by a large laparotomy or by laparoscopic surgery, otherwise a colonoscopy should be performed in the follow-up of the patient to look for a synchronous or metachronous colonic tumor [6,15]. In women it is essential to explore the adnexa [7,18].

It is important to avoid intraoperative rupture and to look for this rupture on anatomopathological examination of the specimen. This rupture has a poor prognosis because it exposes the risk of peritoneal pseudomyxoma [15,19]. This was not found in our observations.

Anatomopathological examination is essential in the subsequent management, especially if a simple appendectomy has been performed. If there is no invasion of the appendicular base, no metastatic embolism in the vessels and no perineural envelopment, a simple appendectomy can be performed, otherwise a right hemicolectomy with lymph node curage should be performed [1, 15, 20].

Long-term postoperative follow-up is crucial because cancers have been discovered after a follow-up of 12 to 33 months and a peritoneal pseudomyxoma occurred after a follow-up of more than 60 months [7,15].

In our study, no tumor recurrence or metastasis was observed after one year of follow-up. Only one patient is currently followed up, the others have been lost to follow-up.

IV. Conclusion

Appendicular mucocele is a rare condition. The treatment of appendicular mucocele is surgical for two reasons; its potential malignancy on the one hand and on the other hand the risk of a peritoneal pseudomyxone or gelatinous disease of the peritoneum in case of perforation. The evolution and prognosis are conditioned by the histological type, the surgical procedure and the peritoneal. Long-term follow-up after surgery is important because of the risk of possible recurrence.

Conflict of Interest: All the authors do not have any possible conflicts of interest.

References Références Referencias

1. *Ghaddou Y, Bouali M, Elhattabi K, Bensardi FZ, Lefriyekh R, Fadil A et al.* Mucocèle Appendiculaire: diagnostic, traitement, pronostic (à propos de 30 cas) Service des urgencces chirurgicales viscerales, P35, CHU Ibn Rochd Casablanca Maroc 2014. Consulté le 12 juillet 2021. *https://studylibfr.com/doc/5529414/MA*.
2. *Wakunga E, Mukuku O, BugemeM, Tshiband M, Kipili A, Mobambo P et al.* Mucocèle appendiculaire: à propos d'un cas observé à Lubumbashi. *Pan African Med J 2014; 18: 36.*
3. *Moujahid M,* Ali A, Achour A, Janati MI. Mucocèle appendiculaire: à propos de dix cas. *Journal africain du cancer.* 2010; 2(2): 107–111. [Google Scholar]
4. *Peghini M, Barabe P, Veillard JM, Diagne L, Sarr MD, Mbaye PS et al*. Gelatinous disease of the peritoneum of appendiceal origin. A propos of 2 Senegalese cases Dakar Med. 1989; 34(1-4): 8-11.
5. *Loungnarath R, Causeret S, Brigand C, Gilly FN, Glehen O.* « Pseudomyxome péritonéal ou maladie gélatineuse du péritoine»: nouveaux concepts et nouvelle prise en charge thérapeutique », *Ann. Chir 2005.130(2): 63-9.*
6. *Weber G, Teriitehau C, Goudard Y, De Saint-Blancard P,. Minvielle F, Chavihot C et al.* Mucocèle appendiculaire. *Feuillets. de Radiologie. 2009; 49 (1): 40-4.*
7. *Pitiakoudis M, Tsaroucha AK , Mimidis K, Polychronidis A, Minopoulos G, Simopoulos C.* Mucocèle of the appendice a report of five cases. *Tech Cooproctol 2004; 2: 109-12.*
8. *Ruiz-Tovar J, Teruel D G, Gastineires M, Dehesa A S, Quindos P L, Molina E M*. Mucocele of the appendix. World J Surg. 2007; 31(3): 542–548.
9. *Kouadio LN, Kouadio K, Turquin TH.* Mucocèle appendiculaire: un diagnostic différentiel auquel il faut penser. *Med Afr N 2000; 47(3): 175-6.*
10. *Fairi A, Detchev R, Patel JC,* Mucocèle appendiculaire: intérêt de l'exérèse par coelioscopie*. J Chir, 1995; 132: 10, 403-405.*
11. *Miraliakbari R, Chapman WH.* Laparoscopic treatment of an appendiceal mucocele. *J Laparo-endosc Adv Surg Tech Ann 1999; 9(2): 159-63.*
12. *Sertkaya M, Emre A, Pircanoglu EM, Peker O, Cengiz E, Karaagaç M.* Giant Appendicular Mucocele Due to Mucinous Cystadenoma. Euroasian Journal of Hepato-Gastroenterology, 6(2); 2016: 186-9.
13. *Armstrong O, Lepourry J, Frampas E, Cassagnau E.*« Mucocèle appendiculaire»: intérêt d'une cœlio conversion de prudence et d'un suivi», Gastro-entérologie Clin Biol 2010; 34(6-7): 416-9.
14. *Ejtehadi F, Brooks J, Hassan Ali H, Vijay V.* Acute Torsion of Appendicular Mucocele. Case Reports in SurgeryVolume 2017, Article ID 9409281, 4 pages https://doi.org/10.1155/2017/9409281
15. *Société Savante des maladies et cancers de l'appareil digestif:* tumeurs appendiculaires (hors TNE) / SNFGE. org-Société savante médicale française d'hepato-gastroenterologie et oncologie.
16. *Motsumi MJ, Motlaleselelo P, Ayane G, Sesay SO, J Valdes JR.* A case report of a giant appendiceal mucocele and literature review Pan African Medical Journal. 2017; 28: 106. doi: 10.11604/pamj.2017.28.106.13832
17. *Foulaa MS, Alardhib AM, Othmanb SA, Mirza Garia MK.* Laparoscopic management of appendicular mucinous cystadenoma, case report. International Journal of Surgery Case Reports 2019; 54: 87–9.
18. *Zissin R, Gayer G, A.Fishman, E. Edelstein, M Shapiro-feinberg M.* Synchronous mucinous tumors of the ovary and the appendix associated with pseudomyxoma peritonei: CT findings. Abdom Imaging 2000; 25: 311-16.
19. *Beyrouti MI, Beyrouti R, Frikha F, Mohamed BA, Mohamed A, Hazem BA et al.* « La maladie gélatineuse du péritoine ». *Presse Médicale 2007; 36(7-8): 1141-47.*
20. *Aletera A, El Ansari W.* Incidental appendiceal mucinous neoplasm mimicking a left adnexalmass: A case report International Journal of Surgery Case Reports, 2020; 74: 132–5.

This page is intentionally left blank

Global Journal of Medical Research: I
Surgeries and Cardiovascular System
Volume 22 Issue 2 Version 1.0 Year 2022
Type: Double Blind Peer Reviewed International Research Journal
Publisher: Global Journals
Online ISSN: 2249-4618 & Print ISSN: 0975-5888

Determinant Factors and Possible Causes Associated with the Success or Failure of Loss of Excess Weight (%Pep) in Patients Submitted to Bariatric Surgery

By Mônica Fernandez, Elias Jirjoss Ilias, Wilson Rodrigues de Freitas Junior, Mônica de Aguiar Medeiros, Ana Carolina Marchiori Souza, Nickolas Nogueira Nunes, Norma Oliveira da Silva & Patrícia Colombo-Souza

Abstract- *Objective:* To know the reasons for the success or failure of excess weight loss in patients undergoing bariatric surgery, and its association with surgical time, quality of food consumption and physical activity.

Method: Female patients were evaluated, with surgical time of 2 -7 years, older than 18 years, without comorbidities seen at a Public Hospital in São Paulo. As a success criterion for surgery, the value of the percentage of excess weight loss (% PEP) greater than or equal to 50. For possible causes of failure, an analysis of the frequency of qualitative consumption of food groups was carried out according to the Fisher test. and for the analysis of the practice of physical activity, the Chi-square test was used.

Keywords: *bariatric surgery, weight loss, morbid obesity, physical activity.*

GJMR-I Classification: *NLMC Code: WJ768*

Strictly as per the compliance and regulations of:

Determinant Factors and Possible Causes Associated with the Success or Failure of Loss of Excess Weight (%Pep) in Patients Submitted to Bariatric Surgery

Mônica Fernandez [α], Elias Jirjoss Ilias [σ], Wilson Rodrigues de Freitas Junior [ρ], Mônica de Aguiar Medeiros [ω], Ana Carolina Marchiori Souza [¥], Nickolas Nogueira Nunes [§], Norma Oliveira da Silva [χ] & Patrícia Colombo-Souza [ν]

Abstract- Objective: To know the reasons for the success or failure of excess weight loss in patients undergoing bariatric surgery, and its association with surgical time, quality of food consumption and physical activity.

Method: Female patients were evaluated, with surgicaltime of 2 -7 years, older than 18 years, without comorbidities seen at a Public Hospital in São Paulo. As a success criterion for surgery, the value of the percentage of excess weightloss (% PEP) greater than or equal to 50. For possible causes of failure, an analysis of the frequency of qualitative consumption of food groups was carried out according to the Fishertest. and for the analysis of the practice of physical activity, the Chi-square test was used.

Result: 45 patients were divided into two groups (G1> PEP n.31) and (G2 <PEP n.14). There was no statistical difference regarding age and surgical time. As for the surgical timeand PEP> 50 aged 2 -3 years (66%), 4 years (81%) and 5 - 6 years (50%). In the food groups, G2 was found to be significant in the butter, white bread, soft drink and coffee with sugar. There was no difference in activity, however, in G1 who did not practice activity, 46% had 4 years of surgery and in G2 who practiced activity, 37.5% were 5 years old, which represents a relationship between surgical time and quality in the practice of the activity.

Conclusion: In order to guarantee long-term postoperative success, the monitoring of amultidisciplinary team is essential.

Keywords: bariatric surgery, weight loss, morbid obesity, physical activity.

I. Introduction

The World Health Organization (WHO) considers obesity a global epidemic conditioned by the dietary profile and the practice of physical activity[1]. The etiology of obesity is complex and multifactorial, resulting from the interaction of genes, the modern environment is a powerful stimulus for the development of obesity, lifestyles and emotionalfactors[1,2]. Risk factors for the development of obesity can be divided into non-modifiable and modifiable, among the latter are decreased physical activity and increased caloric intake that promote increased weight and fat concentration in the body.[2] Few clinical treatments for obesity are effective in losing and maintaining ideal weight.[2] According to studies carriedout by the Brazilian Society of Bariatric and Metabolic Surgery (SBCBM), the indication of bariatric surgery is currently growing, being considered an effective method in the treatmentof severe and its comorbidities and also in long-term weight control. In 1999, bariatric surgery was included among the procedures covered by the Unified Health System (SUS).[3] Gastric Bypass is the most practiced bariatric technique in Brazil, corresponding to 75% of surgeries performed, due to its safety and, mainly, its effectiveness.[4] The patient undergoingsurgery loses 70% to 80% of the initial excess weight.[4] In this mixed procedure, part of the stomach is stapled, which reduces the space for food, and a deviation of the initial bowel , which promotes the increase of hormones that give satiety and reduce hunger.[4] The final proposal would be that the patient develops control in food consumption in quality and quantity in the long term, but the presence of inappropriate lifestyle behaviors such as little or no practice of physical activity and inadequate eating habits can reduce the effectivenessof the surgical procedure and represent the recovery of excess weight lost.[5,6] Literature shows that 15% of patients may have regained weight, returning to the obesity range or even severe obesity between five and ten years after bariatric surgery, and in some cases, increased consumption of food and liquid calories was observed. The mechanisms possibly involved in this process need to be better analyzed.[4,7,8,9,10] The multidisciplinary follow-up is essential for the maintenance of success in bariatric surgery by monitoring the behavior of physical activity and adequate food consumption.

Author α σ ρ ω: Faculty of Medical Sciences da Santa Casa de São Paulo. e-mail: mf001973@gmail.com

Author ¥ § χ: Graduate Student of the Postgraduate Course in Clinical Nutrition do Centro Universitário São Camilo.

Author σ ν: Professor of the Postgraduate Program in Health Sciences and the Medicine Course da Universidade Santo Amaro – Unisa.

II. Objectives

To know the reasons for the success or failure of overweight loss (%PEP) in patients undergoing bariatric surgery, and its relationship (or association) with the elapsed time of surgery, quality of food consumption and physical activity.

III. Method

This research was authorized by the Research Ethics Committee (CEP) of the Santa Casa de Misericórdia Brotherhood of São Paulo under n. of CAAE 23694219.4.0000.5479. Patients were considered to be able to participate in the research after reading and signing the free and informed consent form. This is an observational cross- sectional study. Bariatric patients with surgical time between 2 and 7 years, older than 18 years, without comorbidities treated at the Bariatric Nutrition Specialty Outpatient Clinic of the Hospital da Irmandade da Santa Casa de Misericórdia of São Paulo (ISCMSP) were evaluated. As exclusion criteria: Pregnant women, nursing mothers, drug addicts, alcoholics, smokers, cancer patients and those using drugs for weight loss. To define the percentage difference in weight lost in relation to excess weight (%PEP), the weight recorded on the day of surgery was used as a basis, the ideal weight for the Body Mass Index (BMI) value as proposed by the FAO and for for patients aged 60 years or more, the BMI was used according to the age and minimum weight achieved in the post-surgery period, as described by Novais[11]. The loss of excess weight is considered one of the main parameters to define the success of the surgical procedure, and researchers agree that the criterion for this assessment is the %WBS of at least 50%. Patients were divided into two groups (group I: successful PEP>50% and group II: unsuccessful PEP<50%). To verify the possible causes of overweight recovery in this group, the food frequency questionnaire (FFQ) adapted from SICHIERI[12] and EVERHART[13] was applied with the classification of higher calorie food groups that could contribute to the recovery of excess weight if consumed with higher frequency and for behavior analysis for the practice of physical activity, a questionnaire was applied according to VIGITEL[14] 2018 (Surveillance of Risk Factors and Protection for Chronic Diseases by Telephone Survey). An analysis of the frequency of consumption of selected food groups was performed according to the Fisher test for a significance level of $p < 0.05$. (Table 1), to analyze the practice of physical activity, the Chi-square test was used. (Table 2)

IV. Results

Were evaluated forty-five female patients with surgical times ranging from 2 to7 years were evaluated. Patients were divided into two groups: those considered successful PEP>50%, called G1 (n=31), and those considered unsuccessful with PEP<50%, called G2 (n=14). There was no statistical difference (p=0.815) between the mean ages of G1 (48.3 years±1.19) and G2 (48.5 years ±1.2). In this study group, patients with 2 and 3 years of surgery had 66% success, with 4 years 81% success, with 5 and 6 years 50% success and with 7 years 100% successful.

Table 1: Frequency of use and consumption of food groups, of patients of patients seen according to success and failure of bariatric surgery, (PEP >50% and PEP <50%) ISCMSP, 2020.

Food Groups	Success				Failure				Total		Value offor
	Rarely		Frequent		Rarely		Frequent				
	N	%	N	%	N	%	N	%	N	% Rarely	
Butter	15	48.4	16	51.6	1	7.1	13	92.9	16	35.5	0.0007*
Embedded	18	58.1	13	41.9	10	71.4	4	28.6	28	63.0	0.2886
White breads	9	29.0	22	71.0	2	14.3	12	85.7	11	24.4	0.0027*
Candy	25	80.6	6	19.4	11	78.6	3	21.4	36	80.0	0.3131
Chocolates	26	83.9	5	16.1	13	92.8	1	7.2	39	88.4	0.6930
Farinaceous sweets	11	35.5	20	64.5	13	92.8	1	7.2	24	53.3	0.0042*
Soft drinks	14	45.2	17	54.8	4	28.6	10	71.4	18	40.0	0.0297*
Caffee with sugar	13	41.9	18	58.1	2	14.3	12	85.7	15	33.3	0.0027*
Artificial juice	15	48.4	16	51.6	5	35.7	9	64.3	20	44.4	0.0540
Natural juice	11	35.5	20	64.5	6	42.8	8	57.2	17	37.8	0.0988

Reference: Bariatric Nutrition Specialty Clinic, Hospital da Irmandade da Santa Casa de Misericórdia of São Paulo (ISCMSP)

Table 2: Physical Activity Practice presented by patients seen according to success and failure of bariatric surgery (PEP >50% and PEP <50%). ISCMSP, 2020.

Physical activitypractice	Success		Failure		Total	
	N	%	N	%	N	%
Sim	18	58.1	8	57.1	26	57.8
Não	13	41.9	6	42.9	19	42.2
Total	31	68.9	14	31.1	45	100.0

$X^2 = 0.003$ $p = 0.7887$ (N.S.)

Reference: Bariatric Nutrition Specialty Clinic, Hospital da Irmandade da Santa Casa de Misericórdia of São Paulo (ISCMSP)

V. Discussion

When assessing the age of the patients in this study, a mean age was found to be 48.3 years for the successful group (PEP >50%) and 48.5 years for the failure group (PEP <50%). It was observed that there was no statistically significant difference in age for the success or failure of overweight loss (PEP >50% and PEP <50%) in this study group.

It was also observed that there was no statistically significant difference regarding the surgical time for the success or failure of excess weight loss (PEP >50% and PEP <50%). According to ABESO (2009/2010)[15], it is necessary to maintain weight loss for 5 years, a period in which failure to control weight maintenance can occur. As for the analysis of qualitative food consumption of patients with failure for PEP <50%, there was statistical significance for the frequent consumption of foods from the group of butter, white bread, soda and coffee with sugar. Patients with success for PEP>50%, there was a statistical significance for the frequent consumption of foods from the farinaceous sweet group (Table 1). According to a study by Soares (2017), there is a tendency in this group of patients to return to inadequate eating habits after 2 years of the procedure, with increased consumption of foods rich in carbohydrates and lipids.[16,17,18] For the other food groups, consumption there was no statistically significant difference, that is, consumption is the same in both groups. There was no significant difference between the two groups according to PEP >50% and PEP <50% in relation to the analysis of physical activity practice (Table 2). It is important to mention that of the patients with a success rate for surgery (PEP>50%) and who did not practice physical activity, 46% had 4 years of surgery. Scientific studies report that after 5 to 10 years the risks of weight regain are greater.[19] Another analysis to bepointed out is that for the 57.1% of patients with an unsuccessful rate for surgery (PEP<50%) and who practiced physical activity, 37.5% had 5 years of surgery, which may represent a relationship between surgical time and the practice of physical activity and the quality of thisactivity. According to Alexandrino (2019) of the patients who underwent surgical procedures for weight loss with an average follow-up of 7 years, 74% who were successful in the treatment had regular physical exercise practice[20].

VI. Conclusion

Factors such as age and surgical time were not determinant for success or failure parameters. The consumption of high-calorie food groups more frequently can lead to failure to lose excess weight and promote short-term recovery. The practice of physical activity and surgical time may be related to the successful loss of excess weight. To guarantee an effective treatment, capable of ensuring postoperative success, monitoring by a professional nutritionist, associated with a multidisciplinary team, is essential to promote changes in eating habits due to the new physiological condition. Behavioral changes with healthy eating and the practice of daily physical activity are essential for maintaining the loss of excess weight in post-bariatric patients

References Références Referencias

1. Dias PC, Henriques P, dos Anjos LA, Burlandy L. Obesidade e políticas públicas: concepções e estratégias adotadas pelo Governo Brasileiro. Cad. Saúde Pública 2017; 33(7).
2. Carvalho AC, Rosa RS. Cirurgias bariátricas realizadas pelo Sistema Único de Saúde em Residentes da Região Metropolitana de Porto Alegre, Rio Grande do Sul, 2010- 2016* Epidemiol. Serv. Saude, Brasília, 27(2): e2017010, 2018.
3. Campos JMA. Sociedade Brasileira de Cirurgia Bariátrica e Metabólica – SBCBM – prioriza o incentivo à produção científica. ABCD Arq Bras Cir Dig Editorial 2015; 28(Supl.1): 1 DOI: /10.1590/ S0102-6720201500S10001.
4. Bastos ECL, Barbosa EMWG, Soriano GMS, Santos EA, Vasconcelos SML. Fatores determinantes do reganho ponderal no pós-operatório de cirurgia bariátrica. ABCD, arq. bras. cir. dig. vol.26. supl.1 São Paulo 2013.
5. De Siqueira AC, Zanotti SV. Weight regain: case study of a bariatric surgery program. PSICOLOGIA,SAÚDE & DOENÇAS, 2017, 18(1), 157-169 ISSN - 2182-8407 Sociedade Portuguesa de Psicologia da Saúde - SPPS - www.sp-ps.com DOI: http://dx.doi.org/10.15309/17psd1801.
6. Conceição E, Teixeira F, Rodrigues T, Lourdes M, Bastos AP, VAZ A , Ramalho S. Comportamentos

Alimentares Problemáticos após Cirurgia Bariátrica: Um Estudo com Amostra Nacional Portuguesa. Acta Med Port 2018 Nov; 31(11): 633-640 https://doi.org/10.20344/amp.9237.

7. Silva RS, Kelly, EO. Reganho de peso após o segundo ano do Bypass gástrico em Y de Roux. Com. Ciências Saúde. 2013; 24(4): 341-350.
8. Wobido MR, Dytz DV, Teixeira RC, Pignata GS, Dytz OC, Dytz MG. O papel do reganho de peso no contexto da cirurgia bariátrica e no controle de doenças metabólicas associadas. Brasília Med. 2015; 52 (3/4): 126-132.
9. Cambi MPC, Baretta GAP. Guia alimentar bariátrico: modelo do prato para pacientes submetidos à cirurgia bariátrica. ABCD Arq Bras Cir Dig. 2018; 31(2): e1375. DOI: /10.1590/0102-672020180001 e1375.
10. Luiz LB, Brito Cesar LS, Debon LM, Brandalise LN, Azevedo JT , Monbach KD, Heberle L S , Mottin CC. RESEARCH ARTICLE Variation of Binge Eating One Year after Rouxen-Y Gastric Bypass and Its Relationship with Excess Weight Loss Center of Obesity and Metabolic Syndrome, São Lucas Hospital of Pontifical Catholic Univers. iPLOS ONE | DOI: 10.1371/journal.pone.0167577 December 19, 2016.
11. Novais PFS, Junior IR, Leite CVS, Oliveira MRM. Evolução e classificação do peso corporal em relação aos resultados da cirurgia bariátrica-derivação gástrica em Y de Roux. Arq Bras Endocrinol Metab. 2010; 54(3): 303-310. http://dx.doi.org/10.1590/S0004-27302010000300 009.
12. Sichieri RS, Coitinho DC, Monteiro JB,Coutinho WF. Recomendações de Alimentação e Nutrição Saudável para a População Brasileira. Arq Bras Endocrinol Metab v.44 n.3 São Paulo jun. 2000. http://dx.doi.org/10.1590/S0004-273020000 00300007
13. Ribeiro AC, Sávio KEO, Rodrigues, MLCF, Costa THM, Schmitz BAS. Validação de um questionário de freqüência de consumo alimentar para população adulta. Rev. Nutr. v.19 n.5 Campinas set./out. 2006. https://doi.org/10.1590/S1415-52732006000500003
14. Ministério da Saúde. Vigitel Brasil 2017: vigilância de fatores de risco e proteção para doenças crônicas por inquérito telefônico / Ministério da Saúde, Secretaria de Vigilância em Saúde, Secretaria de Gestão Estratégica e Participativa. Brasília: 2018.
15. Associação Brasileira para o Estudo da Obesidade e da Síndrome Metabólica. Diretrizes brasileiras de obesidade 2009/2010 / ABESO - Associação Brasileira para o Estudo da Obesidade e da Síndrome Metabólica. - 3.ed. - Itapevi, SP: AC Farmacêutica, 2009.
16. Soares JM , Micheletti J, Oliveira ML, Silva ACG, Cavagnari MAV. Práticas alimentares de pacientes em pós operatório de cirurgia bariátrica: revisão integrativa. BRASPEN J 2017; 32 (3): 282-7;
17. Zaparolli MR, Da-Cruz MRR, FREHNER C. Avaliação da ingestão alimentar durante o primeiro ano de pós-operatório de pacientes com diabete melito tipo 2 ou alteração glicêmica submetidos ao bypass gástrico em y-de-roux. ABCD Arq Bras Cir Dig 2018; 31(2): e1367. https://doi.org/10.1590/ 0102-672020180001e1367
18. Zaparolli, M, Reichmann, MTF; Da Cruz, MRR; Madolozzo S, Eliana M, Pereira, Taconeli G, Radominski, R, Ligocki C. Ingestão alimentar após cirurgia bariátrica: uma análise dos macronutrientes e adequação dos grupos alimentares à pirâmide específica. Nutr. clín. diet. hosp. 2018; 38(1):36-39. DOI: 10.12873/381MReichmann.
19. Marcelino, FC. Avaliação das práticas de atividade física em pacientes obesos mórbidos submetidos à operação de bypass gástrico com reconstrução em y de roux com anel. Revista Brasileira de Obesidade, Nutrição e Emagrecimento, São Paulo. v.8. n.43. p. 24- 30. Jan/Fev. 2014. ISSN 1981-9919
20. Alexandrino EG, Marca DFS, Antunes, MO, Oliveira LP, Massuda EM, Bertolini SMMG. Nível de atividade física e percepção do estilo de vida de pacientes pré-cirurgia bariátrica. Einstein (São Paulo) vol.17 no.3 São Paulo, 2019 Epub June 27, 2019. https://doi.org/10.31744/einstein_journal/ 2019ao4619

Global Journal of Medical Research: I
Surgeries and Cardiovascular System
Volume 22 Issue 2 Version 1.0 Year 2022
Type: Double Blind Peer Reviewed International Research Journal
Publisher: Global Journals
Online ISSN: 2249-4618 & Print ISSN: 0975-5888

Our Viewpoint about Therapeutic Tactics in Patients with Chronic Venous Insufficiency

By Ravshan Djalilovich Sunnatov, Sirojbek Zafarovich Tajiev & Boboyor Keldiyorovich Keldiyorov

Abstract- The research is based on a comparative analysis of the results after treatment of patients with chronic venous insufficiency (CVI) occurred in the lower extremities, patients were admitted to the hospital of the Tashkent Medical Academy and Akfa Medline hospital during the period 2016-2021. Patients were divided into 2 groups, which includes patients who treated with new treatment method and second group were control for comparison efficiency of the treatment. Conclusions were drawn about the shortcomings of the tactics of managing patients. During the treatment of patients of the main group, android programs were used to measure the area of trophic ulcers, an improved method of sanitation of trophic ulcers and a therapeutic algorithm for managing patients depending on the phase of the process, which led to an increase in the rate of ulcer granulation, and a reduction in the length of stay of patients in the hospital.

Keywords: varicose disease of the lower extremities, endovenous laser coagulation, radiofrequency ablation, sclerotherapy, vacuum therapy, trophic ulcer.

GJMR-I Classification: NLMC Code: WG 170

Strictly as per the compliance and regulations of:

Our Viewpoint about Therapeutic Tactics in Patients with Chronic Venous Insufficiency

Ravshan Djalilovich Sunnatov [α], Sirojbek Zafarovich Tajiev [σ] & Boboyor Keldiyorovich Keldiyorov [ρ]

Abstract- The research is based on a comparative analysis of the results after treatment of patients with chronic venous insufficiency (CVI) occurred in the lower extremities, patients were admitted to the hospital of the Tashkent Medical Academy and Akfa Medline hospital during the period 2016-2021. Patients were divided into 2 groups, which includes patients who treated with new treatment method and second group were control for comparison efficiency of the treatment. Conclusions were drawn about the shortcomings of the tactics of managing patients. During the treatment of patients of the main group, android programs were used to measure the area of trophic ulcers, an improved method of sanitation of trophic ulcers and a therapeutic algorithm for managing patients depending on the phase of the process, which led to an increase in the rate of ulcer granulation, and a reduction in the length of stay of patients in the hospital.

Keywords: varicose disease of the lower extremities, endovenous laser coagulation, radiofrequency ablation, sclerotherapy, vacuum therapy, trophic ulcer.

I. Introduction

Chronic venous insufficiency (CVI) of the lower extremities due to varicose or post-thrombophlebitic disease is one of the most common vascular pathologies in the world [1, 3].

The prevalence of CVI among women is several times higher than among men. According to the epidemiological data, various forms of this disease occur in 26%-38% of women and 10-20% of men of working age [1, 9, 13].

Trophic ulcers are the most common complication of chronic venous insufficiency; it remains an urgent problem in modern medicine [2, 4, 12]. In 15% there are trophic changes in the skin of the lower extremities, 50% of which are complicated by the formation of leg ulcers. Patients with long-term non-healing purulent wounds often stop working early and become disabled [5, 8].

Only a complex effect allows to achieve healing of a peptic ulcer with a long-term remission of the disease. All this indicates the need to search for new and improve existing therapeutic measures, modern surgical techniques and methods of conservative therapy in this area of surgery [7, 10].

Author α: MD, Doctor of Medical Sciences, professor, Head of the Department of Vascular Surgery, Akfa Medline Hospital, Tashkent, Uzbekistan.
Author σ: PhD student, MD, Department of Vascular Surgery, Tashkent Medical Academy, Tashkent, Uzbekistan. e-mail: author.uzb@mail.ru
Author σ: MD, Vascular Surgeon, Department of Vascular Surgery, Akfa Medline, Tashkent, Uzbekistan.

Traditional open intervention or endovascular technologies are usually considered as the method of choice for surgical treatment. According to research data, the use of radiofrequency ablation (RFA), endovenous laser coagulation (EVLC) and echosclerotherapy is preferable. foam-form, the results of which are comparable to those of traditional surgical methods and which allow outpatient treatment, with the patient's ability to work and a satisfactory cosmetic effect [11, 13].

One of the new methods of treatment of wound defects, including in patients with trophic ulcers of venous origin, is vacuum therapy. Vacuum therapy (Vacuum-assisted closure, VAC) is one of the therapies used to improve wound healing [3]. The use of vacuum therapy in the complex treatment of trophic ulcers of venous etiology improves the results of treatment of patients, which is reflected in the acceleration of the course of the wound process, the ability to perform the plastic stage at an earlier date and in the reduction of inpatient treatment [9].

However, despite the large arsenal of surgical interventions, the results of treatment of this category of patients remain insufficiently satisfactory, there are no data on effective methods of local treatment of trophic ulcers and a unified algorithm for managing patients.

In connection with the above, we undertook a study aimed at improving the treatment of patients with chronic venous insufficiency complicated by trophic ulcers.

Purpose of the study. Improving the results of treatment of chronic venous insufficiency complicated by a trophic ulcer by substantiating the complex use of EVLT with vacuum therapy.

II. Materials and Methods

The study is based on a comparative analysis of the results of treatment of patients with chronic venous insufficiency (CVI) of the lower extremities, who were hospitalized in the departments of vascular surgery and purulent surgery of the Tashkent Medical Academy and in the department of surgery of the private clinic AKFAMedline for the period 2016-2021 Depending on the methods of treatment of CVI of the lower extremities, the patients were divided into 2 groups: control and main. The control group consisted of 58 (47.5%) patients, among whom were patients in the C6 and C6 r

stages, who were treated in the period 2016-2018. In this group, patients underwent conservative and traditional methods of treatment. In parallel, drug treatment was prescribed, consisting of phlebotonics, NSAIDs, antihistamines and antibacterial drugs.

The main group consisted of 64 (52.5%) patients with CVI of the lower extremities, which also included patients in the C6 and C6 r stages, who were diagnosed and treated in the period from 2019 to 2021. The main group of patients underwent EVLC + vacuum + autodermoplasty.

The average age of the patients was 51.20.4 years, women prevailed in the gender ratio.

To assess the severity of the disease, we used a clinical scale for assessing the severity of venous diseases.

Examination of patients included diagnostic methods generally accepted for a surgical hospital; of the special research methods, color duplex scanning of the veins of the lower extremities was used, and, according to indications, X-ray contrast phlebography and bacteriological culture from the area of the trophic ulcer were performed. Given the age groups of patients, if necessary, the list of examinations could include echocardiography, examination of narrow specialists with the appointment of appropriate treatment if comorbidities were detected.

We have developed the program "Program for assessing the area of the trophic ulcer""Wound sizedetector.exe", which allows the non-contact method to determine the size of the trophic ulcer,observe their decrease in dynamics and conduct detailed monitoring with documentary evidence in the database. The interface of the program is convenient, and ease of use makes it possible to recommend it for use, starting with primary health care.

Local treatment of trophic ulcers in the main group consisted of treatment with 0.4% electrolytic aqueous solution (EAS) of sodium hypochlorite in the 1st phase and 0.2% EAS of sodium hypochlorite in the 2nd phase, followed by the use of vacuum therapy in the 1st phase.

III. Results and Discussion

According to the results of the color duplex scanning, depending on the detected reflux, patients with vertical reflux prevailed, compared with a combination of vertical with horizontal and horizontal reflux, as can be seen from Table 1.

Table 1: Distribution of patients according to blood reflux on color duplex scanning of the veins of the lower extremities, n=122

Reflux	Main, n=64	Control, n=58	TOTAL
Vertical	44	40	84
Vertical+horizontal	17	16	33
Horizontal	3	2	5
TOTAL	**64**	**58**	**122**

For the purpose of additional research, all patients underwent bacteriological culture from a trophic ulcer, as a result of which a variety of gram-positive and gram-negative flora were sown, which gave reason to consider the trophic ulcer identical to the infected one in its microflora.

In the control group, we used local treatment (sanitation with 0.3% hydrogen peroxide, proteolytic enzymes (trypsin, chymotrypsin), hydrophilic ointments (levomekol, levosin, dioxysol). Surgical treatment was carried out depending on the type of reflux: in 40 cases (68, 9%) vertical reflux, 16 cases (27.5%) vertical + horizontal reflux and 2 cases (3.6%) horizontal refluxes, performed traditional types of surgical intervention: phlebectomy according to the Babcock technique (38 cases), phlebectomy according to the Babcock technique+ Linton (3 cases), phlebectomy according to the Babcock technique + Cocket (15 cases) and Endolinton (2 cases).

The assessment of the ongoing treatment was carried out at 1, 5, 10, 15, 20, 30 after its start. The evaluation criteria were the indicators of the VCSS scale. The pain syndrome did not disappear completely in any patient.

Against the background of the ongoing treatment, the duration of the inflammation phase decreased to 5.1%, the proliferation phase to 6.7% and the healing phase to 9.8%.

The entire course of treatment in the control group was 8-21 bed-days, and the epithelialization period was 7-18 days.

In the control group of patients after the treatment in 10 cases there was a relapse of the trophic ulcer, in the rest of the patients the trophic ulcer was completely cured.

The proposed method for the local treatment of trophic ulcers, treatment with 0.4% EAS sodium hypochlorite in the 1st phase and 0.2% EAS sodium hypochlorite in the 2nd phase, followed by the use of vacuum therapy in the 1st phase, made it possible to achieve the expected results. Assessment of the most common subjective symptom, pain, on a scale showed that from the beginning of treatment, when the initial level was 7.2, on the 15thday of treatment it decreased to 1.1. According to bacteriological culture, the initial level was 7.6, and on the 15thday after the application of local treatment it decreased to 1.0 (CFU/ml).

Taking into account the results of our studies, we proposed an algorithm for managing patients with trophic ulcers, depending on the phase of the process, which we used in the main group of patients.

Conservative therapy in the main group was the same as in the control group, it consisted primarily in compression, which is considered the basis for the treatment of CVI with trophic ulcers, elevated position of the limb, antibiotic therapy, the appointment of phlebotonics, improvement of microcirculatory disorders, as well as the treatment of comorbidities.

Local treatment was carried out according to the method developed by us.

Regardless of reflux, 44 (68.8%) patients with vertical reflux, 17 (26.6%) with vertical + horizontal reflux, and 3 (4.7%) with horizontal reflux underwent EVLC + vacuum therapy.

To assess the effectiveness of the treatment, we carried out a comparative assessment of the results obtained with the results of the control group according to the VCSS classification parameters, during which the following differences were identified:

1. Decrease in the area of the wound surface by 38.7% versus 18.2% in the control group.
2. Minor pains were noted in 73.6% of patients, the remaining 26.4% had no pain symptoms. While in the control group, the absence of pain symptoms was observed only in 10.7% of patients, and the remaining 89.3% of patients complained of moderate and mild pain.
3. In the main group, mild edema and hyperemia were observed in 69.4% of patients, and in 30.6% of cases, edema and hyperemia were absent, compared to the control group, in 85.3% of patients, edema was moderate and insignificant, in the remaining 14.7% of patients There was no edema or hyperemia.
4. Signs of granulation in the main group appeared on the 5th day from the onset of the disease, while in the control group it was on the 10th day.
5. Against the background of the ongoing treatment, it can be noted that the duration of the inflammation phase decreased to 3.1%, the proliferation phase to 3.6% and the healing phase to 6.2%.

IV. Conclusion

1. Treatment of patients with trophic ulcers against the background of chronic venous insufficiency should be complex and depend on the phase of the process: the most appropriate use of vacuum therapy in the 1st phase, after which we recommend using the method of sanitation of trophic ulcers developed by us in the 2nd phase.
2. The android program developed by us “Wound sizedetector.exe”. Allows non-contact method to measure the area of trophic ulcers and monitor during treatment with documentation of the data obtained.
3. The use of our treatment tactics made it possible to improve the results of treatment of patients with trophic ulcers, which resulted in a decrease and disappearance of pain, a decrease in the area of trophic ulcers, a reduction in the duration of the inflammation phase and, accordingly, a reduction in the length of stay of patients in the hospital.

References Références Referencias

1. Adylkhanov F.T., Fursov A.B. Varicose disease of the lower extremities - analysis of the effectiveness of surgical treatment at the present stage. Literature review // Science and Health. 2017. V.2. pp. 128-143.
2. Babazhanov A.S., Tukhtaev Zh.K., Toirov A.S., Akhmedov G.K., Khudainazarov U.R. Comparison of the effectiveness of endovenous laser coagulation and traditional combined phlebectomy. Science and Peace. 2017. V.1. No. 5. pp. 85-87. ISSN: 2308-4804
3. Bokeria L.A., Mikhalichenko M.V. The effectiveness of endovenous laser obliteration in varicose veins of the lower extremities. Phlebology. 2014; 2: p. 32.
4. Bokeria L.A., Mikhailichenko M.V., Kovalenko V.I. Optimization of surgical treatment of patients with varicose veins of the lower extremities. breast cancer. 2015; 1: pp. 10-14.
5. Dubrovshchik O.I., Dovnar I.S., Koleshko S.V., Yasyuk L.S., Yasyuk A.A. Trophic ulcers of venous genesis: modern possibilities of treatment // Journal of Grodno State Medical University. 2016. No. 2. S. 107-111.
6. Kirshin A.A., Styazhkina S.N., Goryaeva E.A., Khannanova L.B. Combined treatment of chronic venous insufficiency in the stage of severe trophic disorders. Modern Science. 2020. No. 5-1. pp. 223-225. ISSN 2414-9918
7. Kokhan R.S. Vacuum therapy as a component of surgical treatment of patients with chronic venous insufficiency complicated by a trophic ulcer. Journal of Grodno State Medical University. 2016. No. 1. pp. 29-32
8. Davies AH the Seriousness of Chronic Venous Disease: A Review of Real-World Evidence. Adv Ther, 2019, Vol. 36(Suppl. 1), pp. 5-12.
9. DePopas E., Brown M. Varicose Veins and Lower Extremity Venous Insufficiency. SemiinterventRadiol, 2018, Vol. 35, no. 1.pp. 56-61.
10. Novak CJ, Khimani N., Kaye AD et al. Current Therapeutic Interventions in Lower Extremity Venous Insufficiency: a Comprehensive Review. Curr Pain Headache Rep, 2019, Vol. 23, no. 3, p. 16. doi: 10.1007/s11916-019-0759-z

11. Popa RF, Kazanl., Baroi G. Venous ulcer – a new therapeutic approach. Revista medico- chirurgicala a Societatii de Medici siNaturalisti din Iasi. 2016. Vol. 120. no 2. P. 306-310.
12. Santler B., Goerge T. Chronic venous insufficiency – a review of pathophysiology, diagnosis and treatment, Dtsch Dermatol Ges. 2017 Vol. 15. No5. P. 538-556.
13. Youn YJ., Lee J. Chronic venous insufficiency and varicose veins of the lower extremities. Korean J Intern Med, 2019, 34, no. 2, pp. 269-283.

Global Journal of Medical Research: I
Surgeries and Cardiovascular System
Volume 22 Issue 2 Version 1.0 Year 2022
Type: Double Blind Peer Reviewed International Research Journal
Publisher: Global Journals
Online ISSN: 2249-4618 & Print ISSN: 0975-5888

Prevalência De Sinais E Sintomas De Disbiose Intestinal E Sua Relação Com O Sucesso Ou Insucesso Na Perda Do Excesso De Peso (%Pep) Em Pacientes Bariátricos

By Mônica Fernandez, Elias Jirjoss Ilias, Wilson Rodrigues de Freitas Junior, Mônica de Aguiar Medeiros, Klícya Macena da Silva, Jéssica Leite Filho & Patrícia Colombo-Souza

Abstract- *Objective:* To investigate the signs and symptoms of intestinal dysbiosis and its relationship with weight loss (% WBS) and postoperative time in Bariatric patients.

Method: Cross-sectional observational study. Stories - patients with surgical time 2 to 7 years attended at the Nutrition outpatient clinic of a Public Hospital. To verify the possible presence of intestinal dysbiosis, the metabolic tracking questionnaire (QRM) and the Bristol Scale will be applied.

Result: 44 female patients without comorbidities were chosen. Group I (Success) with N.31 and Group II (Failure) with N.13. There was no statistical difference between the groups regarding the QRM and Bristol Scale in the pre- or postoperative period.

Discussion: No group II, the item of people with very poor health has a higher score than no group I. There is a difference in the result in group II regarding the change in consistency in the stools before surgery (28.6%) and postoperative period (42.8%).

GJMR-I Classification: *DDC Code: 305.89636 LCC Code: DT571.O58*

Prevalência De Sinais E Sintomas De Disbiose Intestinal E Sua Relação Com O Sucesso Ou Insucesso Na Perda Do Excesso De Peso (%Pep) Em Pacientes Bariátricos

Mônica Fernandez [α], Elias Jirjoss Ilias [σ], Wilson Rodrigues de Freitas Junior [ρ], Mônica de Aguiar Medeiros [ω], Klícya Macena da Silva [¥], Jéssica Leite Filho [§] & Patrícia Colombo-Souza [χ]

Resumo- Objetivo: Investigar os sinais e sintomas de disbiose intestinal e sua relação com a perda do excesso de peso (%PEP) e o tempo pós- operatório em pacientes Bariátricos.

Método: Estudo transversal observacional. Avaliou-se pacientes com tempo cirúrgico 2 a 7 anos atendidos no ambulatório de Nutrição de um Hospital Público. Para verificar a possível presença de disbiose intestinal será aplicado o questionário de rastreamento metabólico (QRM) e a Escala de Bristol.

Resultado: Foram avaliados 44 pacientes do gênero feminino, sem comorbidades. O grupo I (Sucesso) com N.31 e o grupo II (Insucesso) com N.13. Não houve diferença estatística entre os grupos em relação ao QRM e Escala de Bristol no pré ou pós-operatório. DISCUSSÃO: No grupo II o item de pessoas com saúde muito ruim apresenta um score maior que no grupo I. Destaca-se uma diferença de resultado no grupo II em relação a alteração de consistência nas fezes no pré cirúrgico (28,6%) e pós cirúrgico (42,8%). Segundo a literatura este fato pode representar um possível erro no consumo alimentar e falta de atividade física no grupo com insucesso, com alteração na consistência das fezes e reduzindo a perda do excesso de peso.

Conclusão: O tempo cirúrgico não foi determinante para a presença de disbiose intestinal nos grupos sucesso e insucesso. Segundo o QRM os pacientes do grupo II apresentaram o item de "saúde muito ruim" (pontuação >100). Este fato pode indicar que o insucesso na perda do excesso de peso foi associado ao score de QRM mais alto.

Abstract- Objective: To investigate the signs and symptoms of intestinal dysbiosis and its relationship with weight loss (% WBS) and postoperative time in Bariatric patients.

Method: Cross-sectional observational study. Stories - patients with surgical time 2 to 7 years attended at the Nutrition outpatient clinic of a Public Hospital. To verify the possible presence of intestinal dysbiosis, the metabolic tracking questionnaire (QRM) and the Bristol Scale will be applied.

Result: 44 female patients without comorbidities were chosen. Group I (Success) with N.31 and Group II (Failure) with N.13. There was no statistical difference between the groups regarding the QRM and Bristol Scale in the pre- or postoperative period.

Discussion: No group II, the item of people with very poor health has a higher score than no group I. There is a difference in the result in group II regarding the change in consistency in the stools before surgery (28.6%) and postoperative period (42.8%). According to the literature, this fact may represent a possible error in food consumption and lack of physical activity in the unsuccessful group, with changes in stool consistency and loss of weight loss.

Conclusion: The surgical time was not a determinant for the presence of intestinal dysbiosis in the success and failure groups. According to the QRM of patients in group II for the assessment of the item "very bad health" (score > 100). This fact may indicate that weight loss failure was associated with a higher QRM score.

Author α σ ρ ω: Faculdade de Ciências Médicas da Santa Casa de São Paulo. e-mail: mf001973@gmail.com

Author ¥ §: Graduanda do Curso de Pós-Graduação em Nutrição Clínica do Centro Universitário São Camilo.

Author σ χ: Docente do Programa de Pós-Graduação em Ciências da Saúde e do Curso de Medicina da Universidade Santo Amaro – Unisa.

I. Introdução

A etiologia da obesidade é marcada pela influência da vida moderna, como rotinas agitadas, porém, com pouca atividade física e a cultura de consumo principalmente para alimentos ultraprocessados, tornando a obesidade uma doença de difícil tratamento e controle devido à sua complexidade[1,2]. Pessoas obesas costumam tentar diferentes métodos para reduzir o peso, dietas da moda, exercícios físicos extenuantes, medicamentos com e sem prescrição e intervenções com e sem indicações corretas, mas poucos tratamentos clínicos para a obesidade são efetivos na perda e manutenção do peso ideal.[1,2] A Sociedade Brasileira de Cirurgia Bariátrica e Metabólica (SBCBM) descreve através de estudos que a indicação da cirurgia bariátrica vem crescendo atualmente, sendo considerada um método eficaz no tratamento da obesidade grave e no controle de peso a longo prazo. Em 1999, a cirurgia bariátrica foi incluída entre os procedimentos cobertos pelo Sistema Único de Saúde (SUS).[3,4] O Bypass Gástrico é a técnica bariátrica mais praticada no Brasil, considerado um procedimento misto, que reduz o espaço para o alimento no estômago e promove um desvio do intestino inicial levando ao aumento da liberação de hormônios que promovem a saciedade e diminuem a

fome.[4] Essa somatória entre a menor ingestão de alimentos e aumento da saciedade é o que leva ao emagrecimento, porém a presença de comportamentos inadequados no estilo de vida como pouca ou nenhuma prática de atividade física e hábitos alimentares inadequados podem diminuir a eficácia do procedimento cirúrgico e representar a recuperação do excesso de peso perdido.[5] Os mecanismos possivelmente envolvidos neste processo precisam ser melhor analisados, atualmente estudos referem que a alterações na microbiota intestinal podem estar envolvidos neste processo[6,7,8]. A literatura científica refere que pacientes obesos apresentam uma diferença na microbiota intestinal em comparação com a população magra[9,10]. A disbiose intestinal é uma perturbação na homeostase do microbioma gastrointestinal, ocorre a diminuição dos microorganismos benéficos, aumento dos nocivos e perda da diversidade do microbioma gastrointestinal, tratar-se de uma patologia de etiologia multifatorial, relacionada a fatores farmacológicos, estilo de vida e a alimentação[11,12]. Apesar de vários estudos publicados nos últimos anos relacionando a microbiota intestinal com a fisiopatologia da obesidade e os efeitos a curto prazo da cirurgia bariátrica sobre essa microbiota, não sabemos ainda, em que medida as modificações promovidas pela cirurgia nesse campo podem influenciar no desenvolvimento da disbiose intestinal e afetar a perda do excesso de peso destes pacientes[13,14].

II. Objetivos

Investigar sinais e sintomas de disbiose intestinal e sua relação com a perda do excesso de peso (%PEP) e o tempo pós operatório em pacientes Bariátricos em Hospital Público no Estado de São Paulo.

III. Método

Trata-se de um estudo transversal observacional que foi realizado com pacientes Bariátricos com tempo cirúrgico de 2 a 7 anos, maiores de 18 anos, sem comorbidades atendidos no ambulatório de especialidade de Nutrição Bariátrica do hospital da Irmandade da Santa Casa de Misericórdia de São Paulo (ISCMSP), no período entre novembro 2019 a fevereiro 2020.Esta pesquisa foi autorizada pelo Comitê de Ética em Pesquisa (CEP), da Irmandade Santa Casa de Misericórdia de São Paulo sob o n. de CAAE 23694519.8.0000.5479. Considerando-se aptos os pacientes a participar da pesquisa após a leitura e assinatura do termo de consentimento livre e esclarecido.

Como critério de exclusão: Gestantes, nutrizes, dependentes químicos, etilistas, tabagistas, em uso de medicamentos para perda de peso e que estavam fazendo uso de probióticos ou prebióticos há menos de um mês. Para definir a diferença percentual do peso perdido em relação ao excesso de peso (%PEP), utilizou-se como base o peso registrado no dia da cirurgia, peso ideal para valor do Índice de Massa Corporal (IMC) conforme proposto pela FAO[15] e para os pacientes com 60anos ou mais utilizou-se o IMC de acordo com a idade e peso mínimo alcançado no pós-cirúrgico, conforme descrito por Novais, 2010[16]. A perda do excesso de peso é considerada um dos principais parâmetros para definir o sucesso do procedimento cirúrgico, sendo consenso entre pesquisadores que o critério para esta avaliação é o %PEP de pelo menos 50%. Os pacientes do estudo foram alocados em dois grupos (grupo I: sucesso PEP>50% e grupo II: insucesso PEP<50%), realizado análise estatística através do teste Teste de Mann-Whitney.

Para a investigação dos sinais e sintomas de disbiose intestinal foi aplicado o Questionário de Rastreamento Metabólico (QRM) do Centro Brasileiro de Nutrição Funcional[17], composto por questões subjetivas, coletando informações a respeito do organismo do paciente, relativas aos últimos 30 dias. O QRM é um instrumento utilizado para apurar diversos sinais e sintomas, onde há uma pontuação que o próprio paciente avaliará. A somatória desta pontuação resultará como indício para o rastreamento de possíveis deficiências nutricionais, hipersensibilidades, intolerâncias alimentares ou outras causas, sendo voltada também, a disbiose intestinal[16]. Para análise dos sinais e sintomas específicos para disbiose intestinal serão destacados para seção específica de sintomas gastrointestinais (náuseas, vômito, diarreia, constipação, abdômen distendido, gases intestinais, azia e dor estomacal). As informações coletadas por meio do questionário são interpretadas por uma escala de pontuação de zero a quatro, na qual, zero nunca ou quase nunca teve o sintoma, um ocasionalmente teve, efeito não foi severo, dois ocasionalmente teve, efeito foi severo, três frequentemente teve, efeito não foi severo e a pontuação quatro frequentemente teve, efeito foi severo. Na pontuação final do QRM[17] apresenta-se a descriminação da possível presença de hipersensibilidade e estado de saúde, sendo: <20 pontos: Pessoas mais saudáveis, com menor chance de terem hipersensibilidade, >20 pontos: Indicativo de existência de hipersensibilidades, >40 pontos: Absoluta certeza de existência de hipersensibilidade, > 100 pontos: Pessoas com saúde muito ruim – alta dificuldades para executar tarefas diárias, pode estar associada à presença de outras doenças crônicas e degenerativas.

Para análise do QRM[17] utilizou o teste Exato de Fisher. Para avaliar a consistência das fezes e suas alterações no pré e pós operatório aplicou-se a escala de Bristol18, escala composta por imagens que representam sete tipos imagem de fezes, por sua forma

e consistência. Para análise da escala de Bristol utilizou-se o teste Exato de Fischer e Teste do Qui-quadrado.

IV. Resultados

Foram avaliados 44 pacientes do gênero feminino com tempos cirúrgicos entre 2 e 7 anos. O grupo I (Sucesso) com 31 componentes e o grupo II (Insucesso) com 13 componentes. Neste grupo de estudo, pacientes com 2 e 3 anos de cirurgia apresentaram 66% de sucesso, com 4 anos 81% de sucesso, com 5 e 6 anos 50% de sucesso e com 7anos 100% com sucesso.

A tabela 1 apresenta o resultado obtido de QRM17 para os pacientes do estudo segundo sucesso ou insucesso na perda do excesso de peso.

Tabela 1: QRM[17] obtido pelos pacientes do estudo segundo sucesso e insucesso da cirurgia. (PEP >50% e PEP <50%)

QRM	Sucesso		Insucesso		Total	
	N	%	N	%	N	%
Indicativo de hipersensibilidade	11	35.4	4	30.8	15	34.1
Certeza de hipersensibilidade	19	61.4	5	38.4	24	54.5
Saúde muito ruim	1	3.2	4	30.8	5	11.4
Total	31	70.4	13	29.6	44	100.0

Fonte: Ambulatório de Especialidade de Nutrição Bariátrica do hospital da Irmandade da Santa Casa de Misericórdia de São Paulo (ISCMSP)

A tabela 2 apresenta o resultado da escala de Bristol[18] obtida segundo a percepção do paciente no pré cirúrgico.

Tabela 2: Escala de Bristol[18] obtida pelos pacientes do estudo ANTES do procedimento cirúrgico, segundo sucesso e insucesso da cirurgia. (PEP >50% e PEP <50%)

Escala Bristol ANTES	Sucesso		Insucesso		Total	
	N	%	N	%	N	%
Normal	16	51.6	10	71.4	26	57.8
Alterada	15	48.4	4	28.6	19	42.2
Total	31	68.9	14	31.1	45	100.0

Fonte: Ambulatório de Especialidade de Nutrição Bariátrica do hospital da Irmandade da Santa Casa de Misericórdia de São Paulo (ISCMSP)

A tabela 3 apresenta o resultado da escala de Bristol[18] obtida segundo a percepção do paciente no pós cirúrgico.

Tabela 3: Escala de Bristol18 obtida pelos pacientes do estudo APÓS do procedimento cirúrgico, segundo sucesso e insucesso da cirurgia. (PEP >50% e PEP <50%)

Escala Bristol APÓS	Sucesso		Insucesso		Total	
	N	%	N	%	N	%
Normal	17	54.8	8	57.2	25	55.6
Alterada	14	45.2	6	42.8	20	44.4
Total	31	68.9	14	31.1	45	100.0

Fonte: Ambulatório de Especialidade de Nutrição Bariátrica do hospital da Irmandade da Santa Casa de Misericórdia de São Paulo (ISCMSP)

V. Discussão

Observou-se que também não houve diferença estatística significativa quanto ao tempo cirúrgico para o sucesso ou insucesso da perda do excesso de peso. Segundo a ABESO (2009/2010)[13], faz-se necessária a manutenção da perda de peso por 5 anos, período que pode ocorrer falha na manutenção do peso.

Quanto ao resultado da QRM não houve diferença significativa nos dois grupos (sucesso e insucesso) (Tabela1). Tanto no grupo I quanto no grupo II o valor de maior porcentagem observado foi no item de absoluta certeza de hipersensibilidade. Destaca-se, porém, que no grupo II (insucesso) o item de pessoas com saúde muito ruim apresenta porcentagem maior que no grupo I (sucesso). Zimmermann[19] et. al, 2019

realizou estudo utilizando QRM em mulheres entre 18 e 60anos que participaram de orientações para modificação do consumo alimentar durante 10 semanas, em conclusão houve melhora dos sinais e sintomas para disbiose intestinal segundo resultado do QRM inicial e final do estudo. Este estudo complementa o fato que o Bypass Gástrico pode promove alterações na microbiota intestinal, porém, mudanças no consumo alimentar são necessárias para a promoção da melhora na qualidade de vida no pós operatório, redução do risco no desenvolvimento da disbiose intestinal e a manutenção da perda do excesso peso.

Quanto ao resultado da escala de Bristol[18] não houve diferença significativa tanto no pré (Tabela 2) ou no pós-cirúrgico (Tabela 3) nos grupos. Destaca-se, porém, uma diferença de resultado no grupo II (insucesso) em relação a presença de alteração de consistência nas fezes no pré cirúrgico (28,6%) e pós cirúrgico (42,8%). Godoy et.al. 2011 realizou estudo utilizando Escala de Bristol e observou relação direta entre a prevalência de constipação intestinal e o valor de IMC, quanto maior valor de IMC maior o grau de constipação e alteração de consistência nas fezes. Este fato pode representar um possível erro no consumo alimentar e falta de atividade física neste grupo de pacientes com insucesso, promovendo alteração na consistência das fezes e reduzindo a perda do excesso de peso.

VI. Conclusão

O tempo cirúrgico não foi determinante para a presença de disbiose intestinal nos grupos sucesso e insucesso. Segundo o QRM os pacientes do grupo II apresentaram o item de "saúde muito ruim" (pontuação >100). Este fato pode indicar que o insucesso na perda do excesso de peso foi associado ao score de QRM mais alto.

References Références Referencias

1. Araujo, FM, González, AD, Da Silva LC, Garanhani ML. Obesidade: possibilidade de existir e práticas de cuidado. ARTIGOS • Saude soc. 28 (2) 01 Jul 2019Apr-Jun 2019 https://doi.org/10.1590/S0104-129020191 70152.
2. ABESO - ASSOCIAÇÃO BRASILEIRA PARA ESTUDO DA OBESIDADE E DA SÍNDROME METABÓLICA Diretrizes brasileiras para obesidade: 2009/2010. Itapevi: AC Farmacêutica, 2009. Disponível em: <Disponíve em: https://bit.ly/1si3aPK >. Acesso em:.18 de Janeiro 2021» https://bit.ly/1si3aPK
3. Carvalho, AC, Rosa, RS. Cirurgias bariátricas realizadas pelo Sistema Único de Saúde em residentes da Região Metropolitana de Porto Alegre, Rio Grande do Sul, 2010-2016* Epidemiol. Serv. Saude, Brasília, 27(2): e2017010 2018
4. Campos, JM. A Sociedade Brasileira de Cirurgia Bariátrica e Metabólica – SBCBM – prioriza o incentivo à produção científica. ABCD Arq Bras Cir Dig Editorial 2015; 28(Supl.1): 1 DOI: http://dx.doi.org//10.1590/S0102-6720201500S10001
5. De Siqueira, A. C., Zanotti, S. V. Programa de cirurgia bariátrica e reganho de peso Weight regain: case study.
6. Silva R. S.; Kelly, E. O.; Reganho de peso após o segundo ano do Bypass gástrico em Y de Roux. Com. Ciências Saúde. 2013; 24(4): 341-350.
7. Bastos, ECL, Barbosa, EMWG, Soriano, GMS, Santos, EA, Vasconcelos SML. Fatores determinantes do reganho ponderal no pós-operatório de cirurgia bariátrica. ABCD, arq. bras. cir. dig. vol.26 supl.1 São Paulo 2013.
8. Cambi MPC, Baretta GAP. Guia alimentar bariátrico: modelo do prato para pacientes submetidos à cirurgia bariátrica. ABCD Arq Bras Cir Dig. 2018; 31(2): e1375. DOI: /10.1590/0102-672020180001 e1375.
9. Fasano A. Zonulin and its regulation of intestinal barrier function: the biological door to inflammation, autoimmunity and cancer. Physiol Rev. Vol. 91. p. 151-175. 2011. Acesso em: 20 Mai. 2019.
10. Passos MCF, Moraes-Filho JP. Intestinal Microbiota in Digestive Diseases. Arq. Gastroenterol. vol.54 no.3 São
11. Paulo July/Sept. 2017 Epub July 06, 2017. http://dx.doi.org/10.1590/s0004-2803.201700000-31 Costa DAL, Salomon ALR, Carmo SG, Fortes RC. Prevalência de sinais e sintomas de disbiose intestinal em indivíduos obesos atendidos em uma instituição de ensino de Brasília-DF. Revista Brasileira de Obesidade Nutrição e Emagrecimento, São Paulo. v. 13. n. 80. p. 488-497. Maio/Jun. 2019. ISSN 1981- 9919
12. Pantoja CL, Costa ACCA, Andrade MAH, Silva VV, Brito APSO, Garcia HCR. Diagnóstico e tratamento da disbiose: Revisão Sistemática Diagnosis and Treatment of Dysbiosis: Systematic Review. REAS/EJCH | Vol.Sup.32 | e1368 | DOI: https://doi.org/10.25248/reas.e1368.2019.
13. Wagner N.R.F., Zaparolli M.R., Cruz M.R.R., Schieferdecker M.E.M., Campos A.C.L. Mudanças na microbiota intestinal e uso de probióticos no pós-operatório de bypass gástrico em y-de-roux e gastrectomia vertical sleeve uma revisão integrativa (2018). ABCD, arq. bras. cir. dig. vol.31 no.4 São Paulo 2018 Epub Dec 06, 2018 http://dx.doi.org/10.1590/0102-672020180001e1400
14. Andrade VLA, Regazzoni L.A.A., Moura M.T.R.M., Anjos E.M.S., Oliveira K.A.O., Pereira M.V.R., Pereira M.R.A Amorim N.R., Iskandar S.M. Obesidade e microbiota intestinal. Rev. Médica de Minas Gerais; 25(4), jan. 2015 DOI: http://dx.doi.org/10.5935/2238-3182.20150126

15. FOOD AND AGRICULTURE ORGANIZATION (FAO), WORLD HEALTH ORGANIZATION (WHO). Food safety risk analysis. A guide for national food safety authorities. Rome: FAO; 2006. Disponível em: ftp://ftp.fao.org/docrep/fao/009/a0822e/a0822e00.pdf. Acesso em: 18 de janeiro 2021.
16. Novais PFS, Junior IR, Leite CVS, Oliveira MRM. Evolução e classificação do peso corporal em relação aos resultados da cirurgia bariátrica-derivação gástrica em Y de Roux. Arq Bras Endocrinol Metab. 2010; 54(3): 303-310. http://dx.doi.org/10.1590/S0004-27302010000300009.
17. Galdino, J.; Oselame, G.; Oselame, C.; Neves, E. Questionário de rastreamento metabólico voltado a disbiose intestinal em profissionais de enfermagem. Revista Brasileira de Obesidade, Nutrição e Emagrecimento. São Paulo. Vol. 10. Num. 57. 2016. p. 117-122.
18. Martinez AP, de Azevedo GR. Tradução, adaptação cultural e validação da Bristol Stool Form Scale para a população brasileira. Rev. Latino-Am. Enfermagem maio-jun. 2012; 20(3). https://www.scielo.br/pdf/rlae/v20n3/pt_a21v20n3.pdf.
19. Zimmermann, LC; Ceza,TM. Prevalência de sinais e sintomas avaliados em um grupo de emagrecimento de um centro universitário do oeste do Paraná. Fag Journal of Health, 2019,
20. Godoy, Z. J.; Morales, M. O.; Schlack, C. V.; Papuzinski, C. A. Prevalencia de constipación y su asociación com enfermedades crónicas en Centro de Salud Familiar Marcos Maldonado. Revista Anacem. Vol. 5. Num. 5. p. 32-37. 2011. 8-Hawrelak, J. A.; Myer, S. P.

This page is intentionally left blank

Global Journal of Medical Research: I
Surgeries and Cardiovascular System
Volume 22 Issue 2 Version 1.0 Year 2022
Type: Double Blind Peer Reviewed International Research Journal
Publisher: Global Journals
Online ISSN: 2249-4618 & Print ISSN: 0975-5888

Traumatic Facial Injury Treated by Botulinum Toxin A

By Honório Sampaio Menezes, Danuza Dias Alves, Roberto Chacur, Rodrigo Cadore Mafaldo, Nívea Maria Bordin da Silva Chacur, Leandro Dias Gomes, Vicenzo Stein de Vargas, Giulia Casa Nova Barbosa, Gabriella Andressa Marchesin de Castro & Manuela Guimarães Dias Gomes

Abstract- *Introduction:* Botulinum toxin type A (BTA) is used in the treatment of various medical and aesthetic conditions. The mechanism of action of the drug includes action on fibroblast stimulation, decrease of wound tension and production of collagen.

Objective: This study aimed to demonstrate the use of botulinum toxin as a possible treatment for reducing facial scarring.

Methods: It was a retrospective study involving patients who were treated with BTA for the management of facial scars.

Conclusion: Botulinum toxin A is efficient for the treatment and reduction of facial scars resulting from trauma or surgical interventions.

Keywords: *botulinum toxin A, facial scarring, wound healing, wound tension.*

GJMR-I Classification: *DDC Code: 616.0472 LCC Code: RB127*

Traumatic Facial Injury Treated by Botulinum Toxin A

Honório Sampaio Menezes [α], Danuza Dias Alves [σ], Roberto Chacur [ρ], Rodrigo Cadore Mafaldo [ω], Nívea Maria Bordin da Silva Chacur [¥], Leandro Dias Gomes [§], Vicenzo Stein de Vargas [χ], Giulia Casa Nova Barbosa [ν], Gabriella Andressa Marchesin de Castro [Θ] & Manuela Guimarães Dias Gomes [ζ]

Abstract- ***Introduction:*** **Botulinum toxin type A (BTA) is used in the treatment of various medical and aesthetic conditions. The mechanism of action of the drug includes action on fibroblast stimulation, decrease of wound tension and production of collagen.**

Objective: **This study aimed to demonstrate the use of botulinum toxin as a possible treatment for reducing facial scarring.**

Methods: **It was a retrospective study involving patients who were treated with BTA for the management of facial scars.**

Conclusion: **Botulinum toxin A is efficient for the treatment and reduction of facial scars resulting from trauma or surgical interventions.**

Keywords: botulinum toxin A, facial scarring, wound healing, wound tension.

I. Introduction

Skin lesions by surgeries or trauma results in the formation of scars. Facial scars have psychological effects, as they are impossible to hide, the main clinical objective of the treatment is being to repair the skin and minimize the scar. Surgeons expends time to improve the aesthetic appearance of the skin during repair of trauma or surgery[1,2].

However, most techniques used for scar reductions reduce, instead of eliminating, the muscular system acts on the scar. The underlying musculature produce a hard tension over the wound, therefore, these muscles must be paralyzed using botulinum toxin A (BTA). BTA blocks the acetylcholine release at the neuromuscular junction, producing paralysis[1,3,4,5].

BTA is useful to treat of various medical conditions, and increasingly used in aesthetic medicine. The action of the drug includes diminish wound tension, collagen production, and fibroblasts growth. BTA also works inhibiting the presynaptic release of acetylcholine, as it acts at the neuromuscular junction[2,3,4,5,7].

The administration of BTA causes muscle paralysis which may last from two to six months. It has been used for medical purposes since the 1980s and the use of BTA in the treatment of pathological scars was first reported in 2000. To date, its mechanism is still not clearly understood. In recent years, an increasing number of doctors have preferred intralesional BTA for the prevention and treatment of hypertrophic scars and keloids combined or not with other therapy[2, 3,4,5,7].

The mechanism of wound healing is sophisticate and simultaneous process occurs in three stages: inflammation, granulation tissue formation, and matrix formation. If there are changes in these healing stages, it may result in the formation of pathological scars[1,2,3,7].

The most important factor that defines the appearance of a scar is the force tension over the wound edges during the healing process. The injection of BTA reduces the perpendicular tension on the wound edges and muscular force over the skin, inhibiting the formation of hypertrophic scars and keloids. BTA allows almost complete inhibition of dynamic muscle tension in the edge of the wound during the healing process[2,3,5,6,7]. The present study aimed to demonstrate the use of botulinum toxin as a possible treatment for reducing facial scarring.

II. Methods

This is a retrospective study involving patients treated at clinic who were treated with BTA the management of facial wounds. Qualitative analyses of the evolution of the treated patients were performed. Study approved by the Research Ethics Committee of the Veiga de Almeida University under protocol number 29151320.0.0000.5291.

Clinical Case 1

30-year-old female, had an accident riding a bicycle. She injured her forehead and was treated in the emergency room. On the following day, she went to the clinic concerned with the aesthetic effect of the injury.

Author α: Physician, PhD, SCd., Clínica Leger, Rio Grande do Sul, Brazil.
Author σ: Physician Clínica Leger, Rio Grande do Sul, Brazil.
e-mail: nucleodepesquisa@clinicaleger.com.br
Author ρ: Physician, Specialist, Clínica Leger, Rio de Janeiro, Brazil.
Author ω: Physician, PhD., Clínica Leger, Rio Grande do Sul, Brazil.
Author ¥: Physician, Clínica Leger, Rio de Janeiro, Brazil.
Author §: Physician, PhD., Clínica Leger, Rio Grande do Sul, Brazil.
Author χ: Physician, Clínica Leger, Rio Grande do Sul, Brazil.
Author ν Θ: Biomedical, Clínica Leger, Rio Grande do Sul, Brazil.
Author ζ: Medicine Student, Clínica Leger, Rio Grande do Sul, Brazil.

BTA was applied to the entire forehead and perilesional area (4ui per puncture). The treatment was repeated after three months.

One year later, there was minimal scarring in the area, and at the last follow-up, an unapparent scar.

Figure 1: April 2nd, 2011 – One day after the accident. BTA application

Figure 2: August 22nd, 2011 – Four months after the accident. After treatment

Figure 3: November 2019 – Eight years after the accident. After treatment

Clinical Case 2

30-year-old female, was attacked by a dog that bit her nose. The patient was seen at the clinic 48 hours after the attack. Botulinum toxin A was applied to all nasal musculature (4ui per puncture in this area). The treatment was repeated after 3 months.

One year later, there was minimal scarring in the area.

Figure 4: July 13th, 2019 – Injury

Figure 5: July 15th, 2019 – BTA application

Figure 6: November 29th, 2019 – After treatment

Clinical Case 3

33-year-old female, fell from the stairs and hit a glass door. She cames to the Clinic 3 weeks after the accident. At that time she presented scars on the left frontal region and upper left eyelid, as well as scar retraction with enlargement of the scar near the glabellar region. The patient had some muscle movement in the affected area.

Botulinum toxin A was applied to the affected area and to the scar edges (40ui total of the application), requiring retouching in the regions that showed relief and, also, slight scar movement.

Figure 7: Mar/7/2020 – Wound after stitch removal

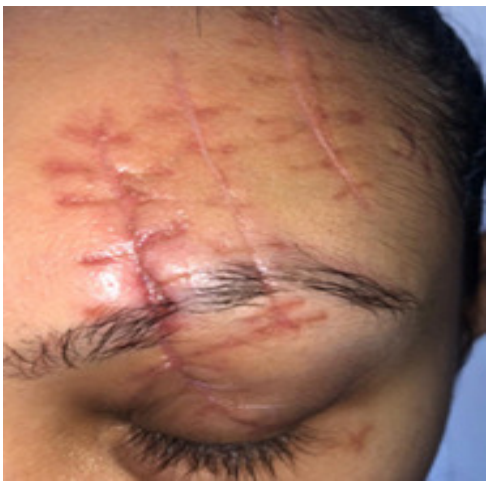


Figure 8: Mar/24/2020 - Aftertreatment

Figure 9: Aug/17/2020 - After treatment

III. Discussion

Scars on the face can affect social well-being through a negative image, sometimes inducing psychological disturb. Its possible minimize the scars facilitating healing applying scar care medicine, occlusive or semi-occlusive dressing, high quality suture material and good closure, and avoiding sun exposure[8]. But, the most important action is reducing the tension on wound edges by applying BTA locally, it may be prevent formation of hypertrophic scars or keloids.

Clinical cases here presented are examples of our experience in recent years using the neuromuscular blockade technique with BTA in facial wounds, which prevents the dynamic movement of the muscles involved, resulting in safe healing and practically

invisible scars. Treatment with BTA was proposed for the treatment of hypertrophic scars and keloids in 2014 and 2015[9, 10].

We have used this technique to treat scars since 2011 (the first case mentioned in this study). Movement produces tension on the edge of the wound, which can be avoid injecting BTA in the region, thus reducing muscle contraction, skin tension, microtrauma, and inflammatory process[11].

BTA reduce the expression of transforming growth factor-beta, which is the main regulator of the formation of hypertrophic scarring[3].

Kim YS et al performed a split-scar, double-blind, randomized, controlled study on 15 patients with early post-thyroidectomy scars. After six months they found a significant improvement in 50% of the scar, comparing the BTA area to the 0.9% saline area[12].

The study of Shaarawy E. et al shows BTA more effective in reducing pruritus and keloid-related pain than intralesional corticosteroids where used to preventing hypertrophic scar[13].

Moreover, the 3D profilometry used to objectively assess keloids treated with BTA showed a lack of results in some surgical cases. Some clinical studies did not support variations in TGF-beta or fibroblasts after the treatment of scars with BTA. Thus, there are conflicting results from points of view available, and further studies are needed to assess the specific role of BTA in the healing phisiology[14].

BTA acts during two to six performing temporary chemodenervation by acting on the presynaptic neuron, blocking the release of acetylcholine, leading to functional denervation of the striated muscle[15].

Regarding of the functional effects of the BTA scar formation maybe takes few months, and our observations of final results depended on the end of the histopathological healing process.

Predictably, the effects of BTA on the maturation of the scar may take more than one month to be visible. Our evaluation, satisfaction and measurement data, demonstrate that the injection of Botulinum Toxin A has a positive effect on scars.

Ziade et al validated scar assessment scales evaluate the healing (texture, size, and color) results of complex wounds, but not to be used in simple facial wounds[16]. Injection of BTA improved significantly the discoloration of the scar. Skin lesions invoke an inflammatory response influencing cellular mediators acting over melanocytes and melanogenesis in several ways. The release of nitric oxide, histamine, p53, and transforming growth factor b1 (TGF-b1) by the inflammatory process induces melanogenesis[17].

Post-inflammatory hyperpigmentation is still unclear, it is believed that activation of melanocytes is involved through oxidative species and inflammatory mediators by skin wounded[18].

Since the damage to the skin is caused by repeated microtrauma due to the movement of the injured tissue (skin traction), it provokes a prolonged release of peptide related to the calcitonin gene and substance P, in addition to the cleavage of the SNAP25 protein, by injection of BTA[19]. With these factors together we can observe that the stress-relieving properties of BTA added to its inhibiting effects on inflammation support the use of the drug in preventing scarring.

IV. Conclusion

Botulinum toxin A is efficient for the treatment and reduction of facial scars resulting from trauma or surgical interventions. This study shows a reduction in the size and pigmentation of scars in patients who were treated with a perilesional injection of BTA, which may be a choice method for avoiding or treat hypertrophic scars and keloids in areas of muscle tension. This study demonstrates good clinical effects of BTA in the treatment and prevention of hypertrophic scars and keloids.

References Références Referencias

1. Lee SH., Min HJ., Kim YW., et al. The Efficacy and Safety of Early Postoperative Botulinum Toxin A Injection for Facial Scars. *Aesthetic Plastic Surgery,* 2017; *42(2), 530–537.* Doi: 10.1007/s00266-017-1008-7.
2. Kasyanju Carrero LM., Ma WW., Liu HF., et al. Botulinum toxin type A for the treatment and prevention of hypertrophic scars and keloids: Updated review. *Journal of Cosmetic Dermatology, 2018*. Doi: 10.1111/jocd.12828.
3. Elhefnawy AM. Assessment of intralesional injection of botulinum toxin type A injection for hypertrophic scars. *Indian J DermatolVenereolLeprol*, 2016; 82(3): 279–283. Doi: 10.4103/0378-6323.173586.
4. Guida S., Farnetani F., Nisticò SP., et al. New trends in botulinum toxin use in dermatology. *DermatolPract Concept,* 2018; 8(4): 277–282. Published 2018 Oct 31. Doi: 10.5826/ dpc.0804a05.
5. Heffelfinger R., Sanan A., Bryant LM. Management of Forehead Scars. *Facial Plastic Surgery Clinics of North America,* 2017; *25(1), 15–24.* Doi: 10.1016/ j.fsc. 2016. 08.012.
6. Padulla GA., Bagatin E., Hirata SH., et al. Effect of botulinum toxin type A on the healing of facial skin biopsies - series of cases. *An Bras Dermatol*, 2018; 93(4): 610–611. Doi: 10.1590/abd1806-4841.2018 7425.
7. Schlessinger J., Gilbert E., Cohen JL., et al. New Uses of Abobotulinumtoxin A in Aesthetics. *Aesthetic Surgery Journal*, 2017; 37(suppl_1), S45–S58. Doi: 10.1093/asj/sjx005.
8. Due E., Rossen K, Sorensen LT., et al. Effect of UV irradiation on cutaneous cicatrices: a randomized,

controlled, trial with clinical, skin reflectance, histological, immunohistochemical and biochemical evaluations. Acta DermVenereol, 2007; 87(1):27–32. Doi: 10.2340/00015555-0154.

9. Heppt MV., Breuninger H., Reinholz M., et al. Current strategies in the treatment of scars and keloids. *Facial PlastSurg,* 2015; 31(4):386-95. Doi: 10.1055/s-0035-1563694.
10. Arno AI., Gauglitz GG., Barret JP., et al. Up-to-date approach to manage keloids and hypertrophic scars: a useful guide. *Burns, 2014*; 40(7): 1255-1266. Doi: 10.1016/j.burns.2014.02.011.
11. Gauglitz GG. Management of keloids and hypertrophic scars: current and emerging options. *ClinCosmetInvestigDermatol,* 2013; 6: 103-114. Doi: 10.2147/CCID.S35252.
12. Kim YS., Lee HJ., Cho SH., et al. Early postoperative treatment of thyroidectomy scars using botulinum toxin: a split-scar, double-blind randomized controlled trial. *Wound Repair Regen, 2014*; 22(5): 605-612. Doi: 10.1111/wrr.12204.
13. Shaarawy E., Hegazy RA., Abdel Hay RM. Intralesionalbotulinum toxin type A equally effective and better tolerated than intralesional steroid in the treatment of keloids: a randomized controlled trial. *J CosmetDermatol*, 2015; 14(2): 161-166. Doi: 10.1111/jocd.12134.
14. Campanati A., Martina E., Giuliodori K., et al. Botulinum toxin off-label use in dermatology: a review. *Skin Appendage Disord,* 2017; 3(1): 39-56. Doi: 10.1159/000452341.
15. Fagien S. Botox for the treatment of dynamic and hyperkinetic facial lines and furrows: adjunctive use in facial aesthetic surgery. PlastReconstrSurg, 1999; 103(2): 701–713. Doi: 10.1097/00006534-199902000-00055.
16. Ziade M., Domergue S., Batifol D., et al. Use of botulinum toxin type A to improve treatment of facial wounds: a prospective randomized study. J PlastReconstrAesthetSurg, 2013; 66(2): 209–214. Doi: 10.1016/j.bjps.2012.09.012.
17. Chadwick S., Heath R., Shah M. Abnormal pigmentation within cutaneous scars: a complication of wound healing. Indian J PlastSurg, 2012; 45(2): 403–411. Doi: 10.4103/0970-0358.101328.
18. Ortonne JP., Bissett DL. Latest insights into skin hyperpigmentation. J InvestigDermatolSympProc, 2008; 13: 10–14. Doi: 10.1038/jidsymp.2008.7.
19. Carmichael NM., Dostrovsky JO., Charlton MP. Peptide-mediated transdermal delivery of botulinum neurotoxin type A reduces neurogenic inflammation in the skin, 2010; 149: 316–324. Doi: 10.1016/j.pain.2010.02.024.

Global Journal of Medical Research: I
Surgeries and Cardiovascular System
Volume 22 Issue 2 Version 1.0 Year 2022
Type: Double Blind Peer Reviewed International Research Journal
Publisher: Global Journals
Online ISSN: 2249-4618 & Print ISSN: 0975-5888

Laparoscopic Superselective Transperitoneal Lumbar Sympathectomy for Treating Plantar Hyperhidrosis

By Rodrigo Cadore Mafaldo, Leila Beltrami Moreira, Ozorio Sampaio Menezes, Honório Sampaio Menezes, Danuza Dias Alves, Gustavo RassierIsolan & Gabriella Andressa Marchesin de Castro

Abstract- *Background:* Retroperitoneoscopic lumbar sympathectomy is the standard surgical treatment for plantar hyperhidrosis. However, it is rarely performed due to the technical complexity of the procedure. This study aimed to describe a modified video-assisted lumbar sympathectomy technique, the superselective transperitoneal lumbar sympathectomy.

Methods: This is a retrospective study of 32 sympathectomies (16 patients) for plantar hyperhidrosis. The procedure is performed with the patient in the supine position and under general anesthesia. A video camera is introduced through the umbilical trocar, and the dissection forceps are introduced through trocars in the suprapubic area and right-and left-iliac fossa. The patient is placed in the Trendelenburg position at the level of the L3 vertebral body.

Keywords: hyperhidrosis, excessive plantar sweating, lumbar sympathectomy, laparoscopic surgery.

GJMR-I Classification: DDC Code: 618.92853059 LCC Code: RJ496.E6

Strictly as per the compliance and regulations of:

Laparoscopic Superselective Transperitoneal Lumbar Sympathectomy for Treating Plantar Hyperhidrosis

Lumbar Sympathectomy for or Treating Plantar Hyperhidrosis

Rodrigo Cadore Mafaldo [α], Leila Beltrami Moreira [σ], Ozorio Sampaio Menezes [ρ], Honório Sampaio Menezes [ω], Danuza Dias Alves [¥], Gustavo RassierIsolan [§] & Gabriella Andressa Marchesin de Castro [χ]

Abstract- ***Background:*** Retroperitoneoscopic lumbar sympathectomy is the standard surgical treatment for plantar hyperhidrosis. However, it is rarely performed due to the technical complexity of the procedure. This study aimed to describe a modified video-assisted lumbar sympathectomy technique, the superselective transperitoneal lumbar sympathectomy.

Methods: This is a retrospective study of 32 sympathectomies (16 patients) for plantar hyperhidrosis. The procedure is performed with the patient in the supine position and under general anesthesia. A video camera is introduced through the umbilical trocar, and the dissection forceps are introduced through trocars in the suprapubic area and right-and left-iliac fossa. The patient is placed in the Trendelenburg position at the level of the L3 vertebral body. Under the direct view of the endoscope and with the aid of dissection forceps, a small opening of the posterior peritoneum is made, through which the right and left sympathetic plexuses are reached for sectioning.

Results: The cases of 16 patients were analyzed. Most of them were women (n = 12), had a higher education degree, and aged from 19 to 36 years (mean of 28.3 ± 4.5 years). Before the procedure, women reported wearing two or three different pairs of socks per day (mean 2.8 ± 1.1), while men, one or two (mean 1.6 ± 0.5; p = 0.039). 75 % of patients declared being very or extremely satisfied and no association between the level of satisfaction and the number of socks changed before the treatment was made (p = 0.78). Most patients had compensatory hyperhidrosis and no other adverse events.

Conclusion: The modified lumbar sympathectomy technique proved to be safe and effective.

Keywords: hyperhidrosis, excessive plantar sweating, lumbar sympathectomy, laparoscopic surgery.

Corresponding Author α: Rua Doutor Guimarães Rosa, 155 - Boa Vista, Porto Alegre – Rio Grande do Sul/RS – Brasil.
e-mail: nucleodepesquisa@clinicaleger.com.br
Author σ ω §: Physician, PhD, SCd.
Author ρ: Physician, Specialist.
Author ¥: Physician.
Author χ: Biomedical.

I. Introduction

Plantar hyperhidrosis is characterized by excessive sweating of the feet mediated by sympathetic stimulation. In severe cases, patients may have gait disturbances, skin lesions, and cold feet. The prevalence of plantar hyperhidrosis is estimated to be from 2.9%[1] to 9%[2]. Retroperitoneoscopic lumbar sympathectomy is the standard surgical treatment. This procedure has been performed with a low rate of complications[3-5] and has improved the quality of life of patients affected by plantar hyperhidrosis[6]. However, the surgery requires that the patient be in a semi-lateral position with elevation of the flank and the use of intra-abdominal and retroperitoneal pneumoperitoneum[3],in addition to, sometimes, being performed in two stages. Some authors perform bilateral sympathectomy which uses a single-sided access and lasts just over an hour[7]. Compensatory hyperhidrosis is the most frequent adverse event and, although infrequent, sexual dysfunction may also occur[8,9].

This study aims to describe a modified video-assisted lumbar sympathectomy technique, called superselective transperitoneal lumbar sympathectomy, which allows the performance of the procedure using a single access with an easy abdominal approach.

II. Materials and Methods

This is a retrospective study of 32 sympathectomies performed in 16 patients with plantar hyperhidrosis treated by laparoscopic superselective transperitoneal lumbar sympathectomy.

III. Technical Description

For better anatomical orientation, considering that the surgery is performed with the patient in the supine position, a simple preoperative abdominal x-ray is performed. The x-ray imaging is done with the patient in the supine position and with the umbilicus marked with a metallic disk, which can be a coin. Thus, the location of the L4 vertebral body can be confirmed in a

straight direction from the umbilicus. The anatomy must be confirmed because there may be anatomical variations or umbilical deviation due to previous abdominal surgery.

The surgery is performed under general anesthesia with the patient in the supine position. A thermometer is placed on each plantar foot surface of the patient. Before anesthetic induction, the temperature of the feet is approximately 25 °C, while after anesthesia, it rises to 32 °C on average.

Pneumoperitoneum with carbon dioxide and pressure of 12 mm of mercury is established and four 5-mm trocars are inserted. The video camera is introduced through the first one placed in the umbilicus. The dissection forceps are introduced through the suprapubic area and right-and left-iliac fossa trocars (Figure 3). The patient is placed in the Trendelenburg position, exposing the root of the mesentery, which is at the level of the L3 vertebral body.

Under the direct view of the endoscope and with the aid of dissection forceps, a small opening of the posterior peritoneum is made close to the third portion of the duodenum after cranial mobilization of the mesentery and intestines (Figure 4).

With the forceps inserted through the umbilical trocar, a lumbar spine projection is made to identify the L3-L4 vertebrae using a C-arm radioscopy to help locate the level of the vertebrae. Thus, consequently, locating the sympathetic chain, which allows for the approach to the sympathetic plexuses on the right and left sides.

Subsequently, the vena cava is bluntly dissected and medially displaced so that the sympathetic chain, usually found behind the vein, can be visualized. The level of the sympathetic resection is confirmed with intraoperative radioscopy at L3-L4 on the right. Thus, the section of the sympathetic chain is carried out.

Similarly, the para-aortic lymph nodes are dissected in order that the rigth sympathetic chain is reached (Figure 7 and 8). Under intraoperative radioscopy, the rigth sympathetic chain is sectioned after its level is confirmed at L3-L4. The opening that gives access to the retroperitoneum, which is soon after closed, can be seen in Figure 9.

When the sympathetic section is performed, there is an increase of approximately 2 °C in temperature and significant vasodilation of the lower limbs. Thus, the section of the sympathetic chain can be confirmed.

The surgery lasts approximately one hour and does not require a hospital stay longer than 24 hours. Prophylactic antibiotics are used in surgery and common analgesics are given to the patient postoperatively. After the removal of the stitches, which usually takes 10 days, the patient can resume normal activities. Figure 10 shows the excellent aesthetic result achieved after the procedure.

IV. Results

The cases of 16 patients who underwent laparoscopic superselective transperitoneal lumbar sympathectomy were analyzed. Most of them were women (n=12) and had a higher education degree. Ages ranged from 19 to 36 years, with a mean of 28.3±4.5 years. Three women had already undergone surgical treatment of plantar hyperhidrosis. Before the procedure, patients mentioned wearing from one to four pairs of socks per day. Women reported wearing two or three different pairs (mean 2.8±1.1), while men, one or two (mean 1.6±0.5; p = 0.039).

Fifty patients were treated over 18 years; however, only 16 were contacted. These underwent the procedure from 1 to 15 years ago. In a telephone interview, 15 patients reported improvement in both feet, while 1 patient described seeing improvement in only one foot and undergoing a second surgery. Patient satisfaction with the treatment was assessed using a five-point Likert scale in which 1 would be dissatisfied; 2, somewhat satisfied; 3, satisfied; 4, very satisfied; and 5, extremely satisfied. Two patients reported being somewhat satisfied (2 points); two were satisfied (3 points); and the other 14were very or extremely satisfied (4 and 5 points). Among both men and women, 75% of patients declared being very or extremely satisfied. There was no association between the degree of satisfaction and the number of pairs of socks changed before treatment (p=0.78).

Three patients reported improvement in sweating, in addition to the feet, in another region of the body. Most patients (n=13) developed compensatory sweating with the most affected region being the trunk, but with less intense sweating. There were no surgical complications in the case series reported in this study; however, one case required reintervention because the first procedure failed to control the symptoms on one side.

V. Discussion

This study presented cases of plantar hyperhidrosis treated with the laparoscopic superselective transperitoneal lumbar sympathectomy technique and the vast majority of patients were satisfied with the treatment.

The extraperitoneal lumbar sympathectomy is a technique little used because of the difficulty of its performance and the lack of trained surgeons. Despite the clear improvement in the quality of life of treated patients[6], the number of patients with the pathology who have delayed surgical treatment is still difficult to assess. As it is performed with a commonly used positioning, the technique described allows for accessing the retroperitoneal space through anterior approaches to the spine, thus, facilitating the procedure.

For having anatomical support, this procedure can be safe pre-and trans-operatively, achieving high levels of satisfaction among patients, as reported after a retroperitoneoscopic lumbar sympathectomy[9]. In this study, there was one unsuccessful case due to the difficulty of dissecting the right-sided nerve; however, during a second intervention, the right lumbar sympathetic chain was sectioned without complications. Compensatory hyperhidrosis was the adverse effect observed in most patients submitted to laparoscopic superselective transperitoneal lumbar sympathectomy. Nonetheless, as it was less intense, it did not negatively affect satisfaction with the surgery. Several studies report that, despite compensatory sweating, the overall quality of life of these patients improves[5,6,10]. No cases of retrograde ejaculation, hemorrhage, visceral injury, infection, or death were recorded.

Compensatory hyperhidrosis occurs in up to two-thirds of cases according to the literature[9-11] and can be exacerbated by the use of a surgical clip to interrupt the sympathetic chain. In these cases, the performance of a new procedure is recommended to remove the clip and section the sympathetic chain[12]. Reinnervation, although less frequent than after thoracic sympathectomy[12], may also occur and require a new surgical intervention.

The body anatomy in the supine position, the insertion of trocars, and camera positioning are well known by surgeons, making this approach advantageous. Moreover, the location of the lumbar sympathetic chain is anatomically constant and, in rare cases, it is not anatomically favorable. Extraperitoneal lumbar sympathectomy, on the other hand, is a technique that has a longer learning curve as it is not the most common route used by surgeons. Furthermore, it requires longer anesthetic time, as well as greater preparation of the team as a whole for the positioning of the patient[4,7]. For being performed with the patient in a commonly used position, the technique described in this study allows for access to the retroperitoneal cavity through an anterior approach to the spine.

The main limitations of this study were the small number of cases, the difficulty in locating all patients, and the long time elapsed between the surgery and telephone interview in some cases. In contrast, this investigation provides data on long-term evolution cases. There seems to have been no preferential selection of women since the number of women is also higher in several other studies in the literature[5,10,13,14].

VI. Conclusion

The treatment of plantar hyperhidrosis using the laparoscopic superselective transperitoneal lumbar sympathectomy technique proved to be effective and safe. In addition to sympathectomy, this direct approach to the retroperitoneum could also be used in difficult-to-access laparoscopic oncologic resections and treat anterior lumbar spine pathologies. Using a robot for this surgical approach is a possibility.

Conflicts of Interest and Source of Funding

The authors declare that there is no conflict of interest or funding sources.

Author contributions

- Elaboration and development of the technique
Rodrigo Cadore Mafaldo
Ozorio Sampaio Menezes
Honório Sampaio Menezes

- Project construction and development
Rodrigo Cadore Mafaldo
Leila Beltrami Moreira
Danuza Dias Alves
Gustavo RassierIsolan

- Construction and development of the article
Rodrigo Cadore Mafaldo
Gabriella Andressa Marchesin de Castro

- Editing and article submission
Rodrigo Cadore Mafaldo
Ozorio Sampaio Menezes
Gabriella Andressa Marchesin de Castro

References Références Referencias

1. Strutton DR., Kowalski JW., Glaser DA., et al. US prevalence of hyperhidrosis and impact on individuals with axillary hyperhidrosis: results from a national survey. J AmAcadDermatol, 2004; 51(2):241-8. Doi: 10.1016/j.jaad.2003.12.040.
2. Hasimoto EN, Caetano D, Reis TA, et al. Hyperhidrosis: prevalence and impact on quality of life. J. Bras. Pneumol, 2018; 44(4): 292-298. Doi: 10.1590/s1806-37562017000000379.
3. Rieger R, Pedevilla S, Pochlauer S. Endoscopiclumbarsympathectomy for plantar hyperhidrosis. Br J Surg. 2009.
4. Branco AW., Branco Filho AJ., Kondo W., et al. Bilateral retroperitoneoscopic lumbar sympathectomy by unilateral access. Braz J UrolInt, 2011; 27; 37(2): 292-293. Doi: 10.1590/S1677-55382011000200032.
5. Lima SO, Santana VR, Valido DP, et al. Retroperitoneoscopic lumbar sympathectomy for plantar hyperhidrosis. Jor of Vas Surg, 2017; 66(6):1806-1813. Doi: 10.1016/j.jvs.2017.05.126.
6. Rieger R., Pedevilla S., Lausecker J. Quality of life after endoscopic lumbar sympathectomy for primary plantar hyperhidrosis. World J Surg, 2015 Apr; 39(4).
7. Loureiro M., Lemos Junior AN., Salvalaggio PRO., et al. Minilaparoscopiclumbarsympathectomywith 3 mm instruments for plantar hyperhidrosis, Jornal Vascular Brasileiro, 2020; 27; 19:e20190072. Doi: 10.1590/1677-5449.180072.

8. Goldstein M., Ectors P., Dereume JP., et al. Complications of lumbar sympathectomy. Retrospective study of 791 patients ActaChirurgicaBelgica, 1977; 76(1): 73-79.
9. Rieger R. Video-assisted retroperitonioscopic lumbar sympathectomy. EurSurg 2012; 1:11-13.
10. Loureiro MP, Campos JRM, Kauffman P, et al. Endoscopic lumbar sympathectomy for women: Effect on compensatory sweat. Clinics, 2008; 63(2): 189-196. Doi: 10.1590/S1807-59322008000200006.
11. Thomas I, Brown J, Vafaied J, Schwrtz RA. Palmoplantar hyperhidrosis: A therapeutic challenge. Am Fam Physitian 2004; 69:1117-20.
12. Lyra RM, Campos JRM, Kang DWW, et al. Diretrizes para a prevenção, diagnóstico e tratamento da hiperidrose compensatória. J. bras.Pneumol., 2008; 34(11): 967-977. Doi: 10.1590/S1806-37132008001100013.
13. Campos JRM, Kauffman P, Werebe EC, et al. Quality os life, before and after thoracic sympathectomy: Report on 378 operated patients. Ann ThoracSurg 2003; 76: 886-91.
14. Rieger R, Loureiro MP, Pedevilla S, Oliveira RA. Endoscopic lumbar simpathectomy following thoracic sympathectomy in patients wuith palmoplantar hyperhidrosis. World J Surg 2011; 35: 49-53. Doi: 10.1007/s00268-010-0801-0.

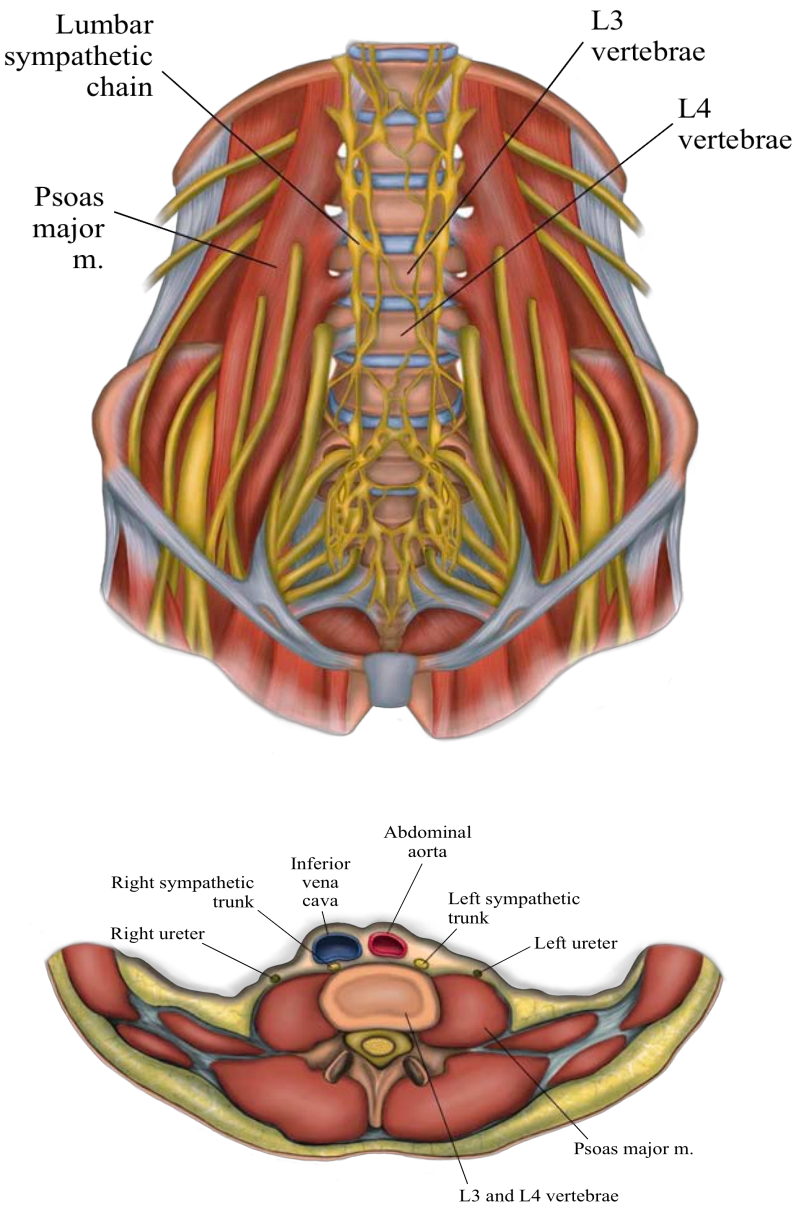


Figure 1 and 2: The anatomy of L4. Source: Own figure.

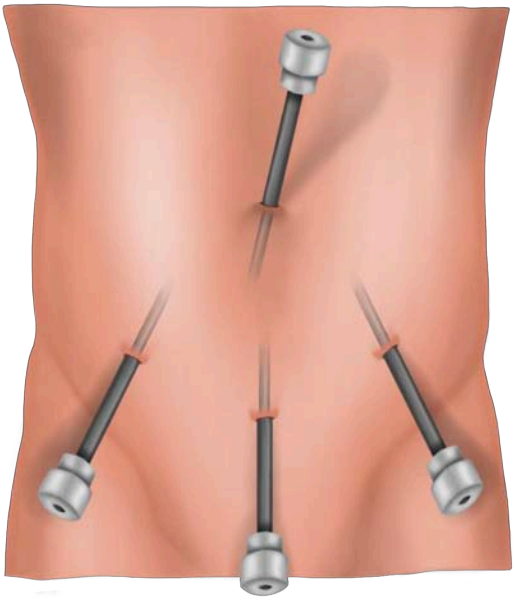


Figure 3: Trocars placed in the umbilicus, suprapubic area, and right-and left-iliac fossa. Source: Own figure.

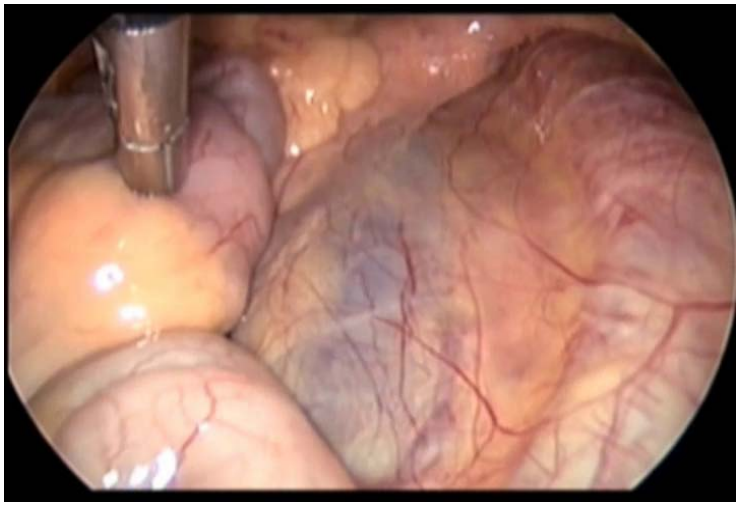
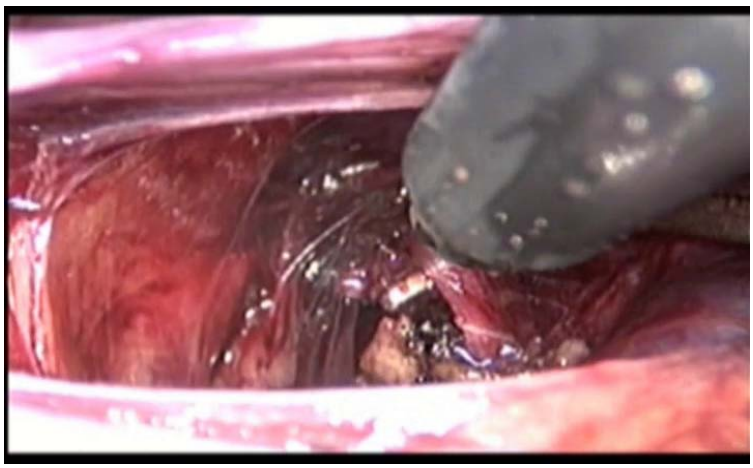


Figure 4: View from left to right, vena cava and aorta artery located retroperitoneally. Source: Own file.



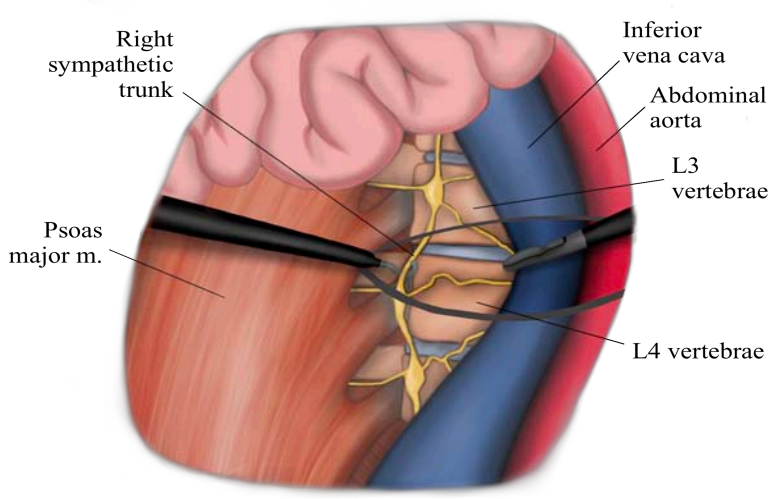
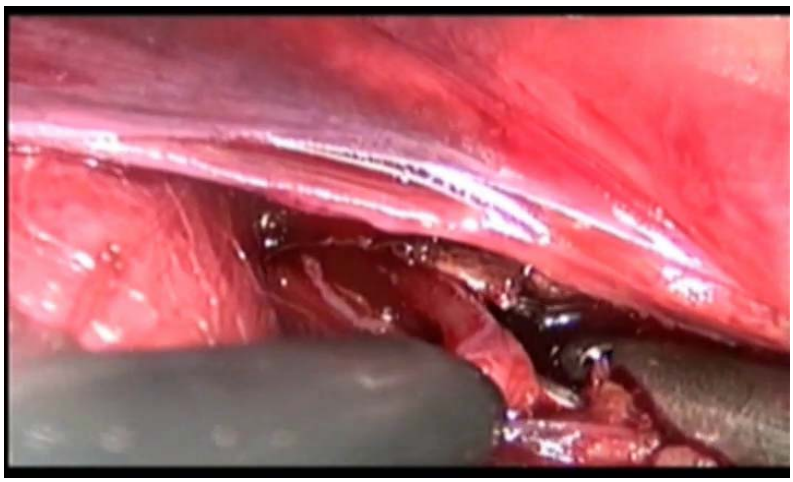


Figure 5 and 6: Opening of the retroperitoneum and dissection lateral to the vena cava. Vena cava is displaced to the right by dissection forceps and the sympathetic chain is visualized in hook forceps. Source: Own figure.



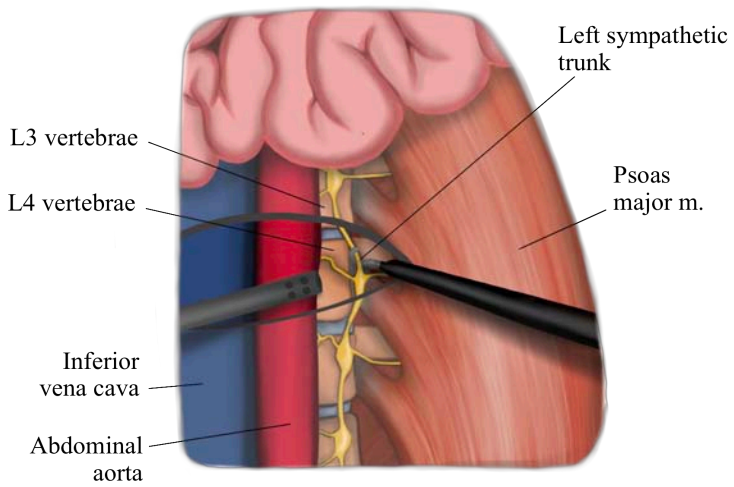


Figure 7 and 8: Left retroperitoneal cavity, aorta displaced to the left, rigth sympathetic chain dissected in hook forceps. Source: Own figure.

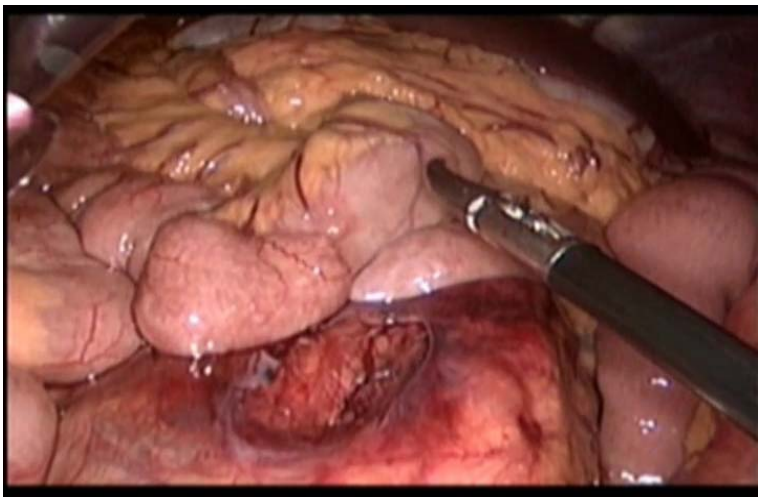


Figure 9: Laparoscopic retro-and transperitoneal opening. Source: Own figure.

Figure 10: Postoperative of laparoscopic superselective transperitoneal sympathectomy. Source: Own figure.

Global Journals Guidelines Handbook 2022

www.GlobalJournals.org

Memberships

Fellows/Associates of Medical Research Council

FMRC/AMRC Memberships

Introduction

FMRC/AMRC is the most prestigious membership of Global Journals accredited by Open Association of Research Society, U.S.A (OARS). The credentials of Fellow and Associate designations signify that the researcher has gained the knowledge of the fundamental and high-level concepts, and is a subject matter expert, proficient in an expertise course covering the professional code of conduct, and follows recognized standards of practice. The credentials are designated only to the researchers, scientists, and professionals that have been selected by a rigorous process by our Editorial Board and Management Board.

Associates of FMRC/AMRC are scientists and researchers from around the world are working on projects/researches that have huge potentials. Members support Global Journals' mission to advance technology for humanity and the profession.

FMRC

Fellow of Medical Research Council

FELLOW OF MEDICAL RESEARCH COUNCIL is the most prestigious membership of Global Journals. It is an award and membership granted to individuals that the Open Association of Research Society judges to have made a 'substantial contribution to the improvement of computer science, technology, and electronics engineering.

The primary objective is to recognize the leaders in research and scientific fields of the current era with a global perspective and to create a channel between them and other researchers for better exposure and knowledge sharing. Members are most eminent scientists, engineers, and technologists from all across the world. Fellows are elected for life through a peer review process on the basis of excellence in the respective domain. There is no limit on the number of new nominations made in any year. Each year, the Open Association of Research Society elect up to 12 new Fellow Members.

Benefit

To the institution

Get letter of appreciation

Global Journals sends a letter of appreciation of author to the Dean or CEO of the University or Company of which author is a part, signed by editor in chief or chief author.

Exclusive Network

Get access to a closed network

A FMRC member gets access to a closed network of Tier 1 researchers and scientists with direct communication channel through our website. Fellows can reach out to other members or researchers directly. They should also be open to reaching out by other.

Career | Credibility | Exclusive | Reputation

Certificate

Certificate, LoR and Laser-Momento

Fellows receive a printed copy of a certificate signed by our Chief Author that may be used for academic purposes and a personal recommendation letter to the dean of member's university.

Career | Credibility | Exclusive | Reputation

Designation

Get honored title of membership

Fellows can use the honored title of membership. The “FMRC” is an honored title which is accorded to a person’s name viz. Dr. John E. Hall, Ph.D., FMRC or William Walldroff, M.S., FMRC.

Career | Credibility | Exclusive | Reputation

Recognition on the Platform

Better visibility and citation

All the Fellow members of FMRC get a badge of "Leading Member of Global Journals" on the Research Community that distinguishes them from others. Additionally, the profile is also partially maintained by our team for better visibility and citation. All fellows get a dedicated page on the website with their biography.

Career | Credibility | Reputation

Future Work

Get discounts on the future publications

Fellows receive discounts on the future publications with Global Journals up to 60%. Through our recommendation programs, members also receive discounts on publications made with OARS affiliated organizations.

Career | Financial

GJ Internal Account

Unlimited forward of Emails

Fellows get secure and fast GJ work emails with unlimited storage of emails that they may use them as their primary email. For example,
john [AT] globaljournals [DOT] org.

Career | Credibility | Reputation

Premium Tools

Access to all the premium tools

To take future researches to the zenith, fellows receive access to all the premium tools that Global Journals have to offer along with the partnership with some of the best marketing leading tools out there.

Financial

Conferences & Events

Organize seminar/conference

Fellows are authorized to organize symposium/seminar/conference on behalf of Global Journal Incorporation (USA). They can also participate in the same organized by another institution as representative of Global Journal. In both the cases, it is mandatory for him to discuss with us and obtain our consent. Additionally, they get free research conferences (and others) alerts.

Career | Credibility | Financial

Early Invitations

Early invitations to all the symposiums, seminars, conferences

All fellows receive the early invitations to all the symposiums, seminars, conferences and webinars hosted by Global Journals in their subject.

Exclusive

Publishing Articles & Books

Earn 60% of sales proceeds

Fellows can publish articles (limited) without any fees. Also, they can earn up to 70% of sales proceeds from the sale of reference/review books/literature/publishing of research paper. The FMRC member can decide its price and we can help in making the right decision.

Exclusive | Financial

Reviewers

Get a remuneration of 15% of author fees

Fellow members are eligible to join as a paid peer reviewer at Global Journals Incorporation (USA) and can get a remuneration of 15% of author fees, taken from the author of a respective paper.

Financial

Access to Editorial Board

Become a member of the Editorial Board

Fellows and Associates may join as a member of the Editorial Board of Global Journals Incorporation (USA) after successful completion of three years as Fellow and as Peer Reviewer.

Career | Credibility | Exclusive | Reputation

And Much More

Get access to scientific museums and observatories across the globe

All members get access to 5 selected scientific museums and observatories across the globe. All researches published with Global Journals will be kept under deep archival facilities across regions for future protections and disaster recovery. They get 10 GB free secure cloud access for storing research files.

ASSOCIATE OF MEDICAL RESEARCH COUNCIL

ASSOCIATE OF MEDICAL RESEARCH COUNCIL is the membership of Global Journals awarded to individuals that the Open Association of Research Society judges to have made a 'substantial contribution to the improvement of computer science, technology, and electronics engineering.

The primary objective is to recognize the leaders in research and scientific fields of the current era with a global perspective and to create a channel between them and other researchers for better exposure and knowledge sharing. Members are most eminent scientists, engineers, and technologists from all across the world. Associate membership can later be promoted to Fellow Membership. Associates are elected for life through a peer review process on the basis of excellence in the respective domain. There is no limit on the number of new nominations made in any year. Each year, the Open Association of Research Society elect up to 12 new Associate Members.

Benefit

To the institution

Get letter of appreciation

Global Journals sends a letter of appreciation of author to the Dean or CEO of the University or Company of which author is a part, signed by editor in chief or chief author.

Exclusive Network

Get access to a closed network

A AMRC member gets access to a closed network of Tier 2 researchers and scientists with direct communication channel through our website. Associates can reach out to other members or researchers directly. They should also be open to reaching out by other.

Career | Credibility | Exclusive | Reputation

Certificate

Certificate, LoR and Laser-Momento

Associates receive a printed copy of a certificate signed by our Chief Author that may be used for academic purposes and a personal recommendation letter to the dean of member's university.

Career | Credibility | Exclusive | Reputation

Designation

Get honored title of membership

Associates can use the honored title of membership. The “AMRC” is an honored title which is accorded to a person’s name viz. Dr. John E. Hall, Ph.D., AMRC or William Walldroff, M.S., AMRC.

Career | Credibility | Exclusive | Reputation

Recognition on the Platform

Better visibility and citation

All the Associate members of AMRC get a badge of "Leading Member of Global Journals" on the Research Community that distinguishes them from others. Additionally, the profile is also partially maintained by our team for better visibility and citation.

Career | Credibility | Reputation

Future Work

Get discounts on the future publications

Associates receive discounts on future publications with Global Journals up to 30%. Through our recommendation programs, members also receive discounts on publications made with OARS affiliated organizations.

Career | Financial

GJ Account

Unlimited forward of Emails

Associates get secure and fast GJ work emails with 5GB forward of emails that they may use them as their primary email. For example,
john [AT] globaljournals [DOT] org.

Career | Credibility | Reputation

Premium Tools

Access to all the premium tools

To take future researches to the zenith, fellows receive access to almost all the premium tools that Global Journals have to offer along with the partnership with some of the best marketing leading tools out there.

Financial

Conferences & Events

Organize seminar/conference

Associates are authorized to organize symposium/seminar/conference on behalf of Global Journal Incorporation (USA). They can also participate in the same organized by another institution as representative of Global Journal. In both the cases, it is mandatory for him to discuss with us and obtain our consent. Additionally, they get free research conferences (and others) alerts.

Career | Credibility | Financial

Early Invitations

Early invitations to all the symposiums, seminars, conferences

All associates receive the early invitations to all the symposiums, seminars, conferences and webinars hosted by Global Journals in their subject.

Exclusive

Publishing Articles & Books

Earn 60% of sales proceeds

Associates can publish articles (limited) without any fees. Also, they can earn up to 30-40% of sales proceeds from the sale of reference/review books/literature/publishing of research paper

Exclusive | Financial

Reviewers

Get a remuneration of 15% of author fees

Associate members are eligible to join as a paid peer reviewer at Global Journals Incorporation (USA) and can get a remuneration of 15% of author fees, taken from the author of a respective paper.

Financial

And Much More

Get access to scientific museums and observatories across the globe

All members get access to 2 selected scientific museums and observatories across the globe. All researches published with Global Journals will be kept under deep archival facilities across regions for future protections and disaster recovery. They get 5 GB free secure cloud access for storing research files.

Associate	Fellow	Research Group	Basic
$4800 **lifetime designation**	$6800 **lifetime designation**	$12500.00 **organizational**	APC **per article**
Certificate, LoR and Momento **2** discounted publishing/year **Gradation** of Research **10** research contacts/day **1 GB** Cloud Storage **GJ** Community Access	**Certificate,** LoR and Momento **Unlimited** discounted publishing/year **Gradation** of Research **Unlimited** research contacts/day **5 GB** Cloud Storage **Online Presense** Assistance **GJ** Community Access	**Certificates,** LoRs and Momentos **Unlimited** free publishing/year **Gradation** of Research **Unlimited** research contacts/day **Unlimited** Cloud Storage **Online Presense** Assistance **GJ** Community Access	**GJ** Community Access

Preferred Author Guidelines

We accept the manuscript submissions in any standard (generic) format.

We typeset manuscripts using advanced typesetting tools like Adobe In Design, CorelDraw, TeXnicCenter, and TeXStudio. We usually recommend authors submit their research using any standard format they are comfortable with, and let Global Journals do the rest.

Alternatively, you can download our basic template from https://globaljournals.org/Template

Authors should submit their complete paper/article, including text illustrations, graphics, conclusions, artwork, and tables. Authors who are not able to submit manuscript using the form above can email the manuscript department at submit@globaljournals.org or get in touch with chiefeditor@globaljournals.org if they wish to send the abstract before submission.

Before and during Submission

Authors must ensure the information provided during the submission of a paper is authentic. Please go through the following checklist before submitting:

1. Authors must go through the complete author guideline and understand and *agree to Global Journals' ethics and code of conduct,* along with author responsibilities.
2. Authors must accept the privacy policy, terms, and conditions of Global Journals.
3. Ensure corresponding author's email address and postal address are accurate and reachable.
4. Manuscript to be submitted must include keywords, an abstract, a paper title, co-author(s') names and details (email address, name, phone number, and institution), figures and illustrations in vector format including appropriate captions, tables, including titles and footnotes, a conclusion, results, acknowledgments and references.
5. Authors should submit paper in a ZIP archive if any supplementary files are required along with the paper.
6. Proper permissions must be acquired for the use of any copyrighted material.
7. Manuscript submitted *must not have been submitted or published elsewhere* and all authors must be aware of the submission.

Declaration of Conflicts of Interest

It is required for authors to declare all financial, institutional, and personal relationships with other individuals and organizations that could influence (bias) their research.

Policy on Plagiarism

Plagiarism is not acceptable in Global Journals submissions at all.

Plagiarized content will not be considered for publication. We reserve the right to inform authors' institutions about plagiarism detected either before or after publication. If plagiarism is identified, we will follow COPE guidelines:

Authors are solely responsible for all the plagiarism that is found. The author must not fabricate, falsify or plagiarize existing research data. The following, if copied, will be considered plagiarism:

- Words (language)
- Ideas
- Findings
- Writings
- Diagrams
- Graphs
- Illustrations
- Lectures

- Printed material
- Graphic representations
- Computer programs
- Electronic material
- Any other original work

Authorship Policies

Global Journals follows the definition of authorship set up by the Open Association of Research Society, USA. According to its guidelines, authorship criteria must be based on:

1. Substantial contributions to the conception and acquisition of data, analysis, and interpretation of findings.
2. Drafting the paper and revising it critically regarding important academic content.
3. Final approval of the version of the paper to be published.

Changes in Authorship

The corresponding author should mention the name and complete details of all co-authors during submission and in manuscript. We support addition, rearrangement, manipulation, and deletions in authors list till the early view publication of the journal. We expect that corresponding author will notify all co-authors of submission. We follow COPE guidelines for changes in authorship.

Copyright

During submission of the manuscript, the author is confirming an exclusive license agreement with Global Journals which gives Global Journals the authority to reproduce, reuse, and republish authors' research. We also believe in flexible copyright terms where copyright may remain with authors/employers/institutions as well. Contact your editor after acceptance to choose your copyright policy. You may follow this form for copyright transfers.

Appealing Decisions

Unless specified in the notification, the Editorial Board's decision on publication of the paper is final and cannot be appealed before making the major change in the manuscript.

Acknowledgments

Contributors to the research other than authors credited should be mentioned in Acknowledgments. The source of funding for the research can be included. Suppliers of resources may be mentioned along with their addresses.

Declaration of funding sources

Global Journals is in partnership with various universities, laboratories, and other institutions worldwide in the research domain. Authors are requested to disclose their source of funding during every stage of their research, such as making analysis, performing laboratory operations, computing data, and using institutional resources, from writing an article to its submission. This will also help authors to get reimbursements by requesting an open access publication letter from Global Journals and submitting to the respective funding source.

Preparing your Manuscript

Authors can submit papers and articles in an acceptable file format: MS Word (doc, docx), LaTeX (.tex, .zip or .rar including all of your files), Adobe PDF (.pdf), rich text format (.rtf), simple text document (.txt), Open Document Text (.odt), and Apple Pages (.pages). Our professional layout editors will format the entire paper according to our official guidelines. This is one of the highlights of publishing with Global Journals—authors should not be concerned about the formatting of their paper. Global Journals accepts articles and manuscripts in every major language, be it Spanish, Chinese, Japanese, Portuguese, Russian, French, German, Dutch, Italian, Greek, or any other national language, but the title, subtitle, and abstract should be in English. This will facilitate indexing and the pre-peer review process.

The following is the official style and template developed for publication of a research paper. Authors are not required to follow this style during the submission of the paper. It is just for reference purposes.

Manuscript Style Instruction (Optional)

- Microsoft Word Document Setting Instructions.
- Font type of all text should be Swis721 Lt BT.
- Page size: 8.27" x 11'", left margin: 0.65, right margin: 0.65, bottom margin: 0.75.
- Paper title should be in one column of font size 24.
- Author name in font size of 11 in one column.
- Abstract: font size 9 with the word "Abstract" in bold italics.
- Main text: font size 10 with two justified columns.
- Two columns with equal column width of 3.38 and spacing of 0.2.
- First character must be three lines drop-capped.
- The paragraph before spacing of 1 pt and after of 0 pt.
- Line spacing of 1 pt.
- Large images must be in one column.
- The names of first main headings (Heading 1) must be in Roman font, capital letters, and font size of 10.
- The names of second main headings (Heading 2) must not include numbers and must be in italics with a font size of 10.

Structure and Format of Manuscript

The recommended size of an original research paper is under 15,000 words and review papers under 7,000 words. Research articles should be less than 10,000 words. Research papers are usually longer than review papers. Review papers are reports of significant research (typically less than 7,000 words, including tables, figures, and references)

A research paper must include:

a) A title which should be relevant to the theme of the paper.
b) A summary, known as an abstract (less than 150 words), containing the major results and conclusions.
c) Up to 10 keywords that precisely identify the paper's subject, purpose, and focus.
d) An introduction, giving fundamental background objectives.
e) Resources and techniques with sufficient complete experimental details (wherever possible by reference) to permit repetition, sources of information must be given, and numerical methods must be specified by reference.
f) Results which should be presented concisely by well-designed tables and figures.
g) Suitable statistical data should also be given.
h) All data must have been gathered with attention to numerical detail in the planning stage.

Design has been recognized to be essential to experiments for a considerable time, and the editor has decided that any paper that appears not to have adequate numerical treatments of the data will be returned unrefereed.

i) Discussion should cover implications and consequences and not just recapitulate the results; conclusions should also be summarized.
j) There should be brief acknowledgments.
k) There ought to be references in the conventional format. Global Journals recommends APA format.

Authors should carefully consider the preparation of papers to ensure that they communicate effectively. Papers are much more likely to be accepted if they are carefully designed and laid out, contain few or no errors, are summarizing, and follow instructions. They will also be published with much fewer delays than those that require much technical and editorial correction.

The Editorial Board reserves the right to make literary corrections and suggestions to improve brevity.

Format Structure

It is necessary that authors take care in submitting a manuscript that is written in simple language and adheres to published guidelines.

All manuscripts submitted to Global Journals should include:

Title

The title page must carry an informative title that reflects the content, a running title (less than 45 characters together with spaces), names of the authors and co-authors, and the place(s) where the work was carried out.

Author details

The full postal address of any related author(s) must be specified.

Abstract

The abstract is the foundation of the research paper. It should be clear and concise and must contain the objective of the paper and inferences drawn. It is advised to not include big mathematical equations or complicated jargon.

Many researchers searching for information online will use search engines such as Google, Yahoo or others. By optimizing your paper for search engines, you will amplify the chance of someone finding it. In turn, this will make it more likely to be viewed and cited in further works. Global Journals has compiled these guidelines to facilitate you to maximize the web-friendliness of the most public part of your paper.

Keywords

A major lynchpin of research work for the writing of research papers is the keyword search, which one will employ to find both library and internet resources. Up to eleven keywords or very brief phrases have to be given to help data retrieval, mining, and indexing.

One must be persistent and creative in using keywords. An effective keyword search requires a strategy: planning of a list of possible keywords and phrases to try.

Choice of the main keywords is the first tool of writing a research paper. Research paper writing is an art. Keyword search should be as strategic as possible.

One should start brainstorming lists of potential keywords before even beginning searching. Think about the most important concepts related to research work. Ask, “What words would a source have to include to be truly valuable in a research paper?” Then consider synonyms for the important words.

It may take the discovery of only one important paper to steer in the right keyword direction because, in most databases, the keywords under which a research paper is abstracted are listed with the paper.

Numerical Methods

Numerical methods used should be transparent and, where appropriate, supported by references.

Abbreviations

Authors must list all the abbreviations used in the paper at the end of the paper or in a separate table before using them.

Formulas and equations

Authors are advised to submit any mathematical equation using either MathJax, KaTeX, or LaTeX, or in a very high-quality image.

Tables, Figures, and Figure Legends

Tables: Tables should be cautiously designed, uncrowned, and include only essential data. Each must have an Arabic number, e.g., Table 4, a self-explanatory caption, and be on a separate sheet. Authors must submit tables in an editable format and not as images. References to these tables (if any) must be mentioned accurately.

Figures

Figures are supposed to be submitted as separate files. Always include a citation in the text for each figure using Arabic numbers, e.g., Fig. 4. Artwork must be submitted online in vector electronic form or by emailing it.

Preparation of Eletronic Figures for Publication

Although low-quality images are sufficient for review purposes, print publication requires high-quality images to prevent the final product being blurred or fuzzy. Submit (possibly by e-mail) EPS (line art) or TIFF (halftone/ photographs) files only. MS PowerPoint and Word Graphics are unsuitable for printed pictures. Avoid using pixel-oriented software. Scans (TIFF only) should have a resolution of at least 350 dpi (halftone) or 700 to 1100 dpi (line drawings). Please give the data for figures in black and white or submit a Color Work Agreement form. EPS files must be saved with fonts embedded (and with a TIFF preview, if possible).

For scanned images, the scanning resolution at final image size ought to be as follows to ensure good reproduction: line art: >650 dpi; halftones (including gel photographs): >350 dpi; figures containing both halftone and line images: >650 dpi.

Color charges: Authors are advised to pay the full cost for the reproduction of their color artwork. Hence, please note that if there is color artwork in your manuscript when it is accepted for publication, we would require you to complete and return a Color Work Agreement form before your paper can be published. Also, you can email your editor to remove the color fee after acceptance of the paper.

Tips for writing a good quality Medical Research Paper

1. Choosing the topic: In most cases, the topic is selected by the interests of the author, but it can also be suggested by the guides. You can have several topics, and then judge which you are most comfortable with. This may be done by asking several questions of yourself, like "Will I be able to carry out a search in this area? Will I find all necessary resources to accomplish the search? Will I be able to find all information in this field area?" If the answer to this type of question is "yes," then you ought to choose that topic. In most cases, you may have to conduct surveys and visit several places. Also, you might have to do a lot of work to find all the rises and falls of the various data on that subject. Sometimes, detailed information plays a vital role, instead of short information. Evaluators are human: The first thing to remember is that evaluators are also human beings. They are not only meant for rejecting a paper. They are here to evaluate your paper. So present your best aspect.

2. Think like evaluators: If you are in confusion or getting demotivated because your paper may not be accepted by the evaluators, then think, and try to evaluate your paper like an evaluator. Try to understand what an evaluator wants in your research paper, and you will automatically have your answer. Make blueprints of paper: The outline is the plan or framework that will help you to arrange your thoughts. It will make your paper logical. But remember that all points of your outline must be related to the topic you have chosen.

3. Ask your guides: If you are having any difficulty with your research, then do not hesitate to share your difficulty with your guide (if you have one). They will surely help you out and resolve your doubts. If you can't clarify what exactly you require for your work, then ask your supervisor to help you with an alternative. He or she might also provide you with a list of essential readings.

4. Use of computer is recommended: As you are doing research in the field of medical research then this point is quite obvious. Use right software: Always use good quality software packages. If you are not capable of judging good software, then you can lose the quality of your paper unknowingly. There are various programs available to help you which you can get through the internet.

5. Use the internet for help: An excellent start for your paper is using Google. It is a wondrous search engine, where you can have your doubts resolved. You may also read some answers for the frequent question of how to write your research paper or find a model research paper. You can download books from the internet. If you have all the required books, place importance on reading, selecting, and analyzing the specified information. Then sketch out your research paper. Use big pictures: You may use encyclopedias like Wikipedia to get pictures with the best resolution. At Global Journals, you should strictly follow here.

6. Bookmarks are useful: When you read any book or magazine, you generally use bookmarks, right? It is a good habit which helps to not lose your continuity. You should always use bookmarks while searching on the internet also, which will make your search easier.

7. Revise what you wrote: When you write anything, always read it, summarize it, and then finalize it.

8. Make every effort: Make every effort to mention what you are going to write in your paper. That means always have a good start. Try to mention everything in the introduction—what is the need for a particular research paper. Polish your work with good writing skills and always give an evaluator what he wants. Make backups: When you are going to do any important thing like making a research paper, you should always have backup copies of it either on your computer or on paper. This protects you from losing any portion of your important data.

9. Produce good diagrams of your own: Always try to include good charts or diagrams in your paper to improve quality. Using several unnecessary diagrams will degrade the quality of your paper by creating a hodgepodge. So always try to include diagrams which were made by you to improve the readability of your paper. Use of direct quotes: When you do research relevant to literature, history, or current affairs, then use of quotes becomes essential, but if the study is relevant to science, use of quotes is not preferable.

10. Use proper verb tense: Use proper verb tenses in your paper. Use past tense to present those events that have happened. Use present tense to indicate events that are going on. Use future tense to indicate events that will happen in the future. Use of wrong tenses will confuse the evaluator. Avoid sentences that are incomplete.

11. Pick a good study spot: Always try to pick a spot for your research which is quiet. Not every spot is good for studying.

12. Know what you know: Always try to know what you know by making objectives, otherwise you will be confused and unable to achieve your target.

13. Use good grammar: Always use good grammar and words that will have a positive impact on the evaluator; use of good vocabulary does not mean using tough words which the evaluator has to find in a dictionary. Do not fragment sentences. Eliminate one-word sentences. Do not ever use a big word when a smaller one would suffice.

Verbs have to be in agreement with their subjects. In a research paper, do not start sentences with conjunctions or finish them with prepositions. When writing formally, it is advisable to never split an infinitive because someone will (wrongly) complain. Avoid clichés like a disease. Always shun irritating alliteration. Use language which is simple and straightforward. Put together a neat summary.

14. Arrangement of information: Each section of the main body should start with an opening sentence, and there should be a changeover at the end of the section. Give only valid and powerful arguments for your topic. You may also maintain your arguments with records.

15. Never start at the last minute: Always allow enough time for research work. Leaving everything to the last minute will degrade your paper and spoil your work.

16. Multitasking in research is not good: Doing several things at the same time is a bad habit in the case of research activity. Research is an area where everything has a particular time slot. Divide your research work into parts, and do a particular part in a particular time slot.

17. Never copy others' work: Never copy others' work and give it your name because if the evaluator has seen it anywhere, you will be in trouble. Take proper rest and food: No matter how many hours you spend on your research activity, if you are not taking care of your health, then all your efforts will have been in vain. For quality research, take proper rest and food.

18. Go to seminars: Attend seminars if the topic is relevant to your research area. Utilize all your resources.

19. Refresh your mind after intervals: Try to give your mind a rest by listening to soft music or sleeping in intervals. This will also improve your memory. Acquire colleagues: Always try to acquire colleagues. No matter how sharp you are, if you acquire colleagues, they can give you ideas which will be helpful to your research.

20. Think technically: Always think technically. If anything happens, search for its reasons, benefits, and demerits. Think and then print: When you go to print your paper, check that tables are not split, headings are not detached from their descriptions, and page sequence is maintained.

21. Adding unnecessary information: Do not add unnecessary information like "I have used MS Excel to draw graphs." Irrelevant and inappropriate material is superfluous. Foreign terminology and phrases are not apropos. One should never take a broad view. Analogy is like feathers on a snake. Use words properly, regardless of how others use them. Remove quotations. Puns are for kids, not grunt readers. Never oversimplify: When adding material to your research paper, never go for oversimplification; this will definitely irritate the evaluator. Be specific. Never use rhythmic redundancies. Contractions shouldn't be used in a research paper. Comparisons are as terrible as clichés. Give up ampersands, abbreviations, and so on. Remove commas that are not necessary. Parenthetical words should be between brackets or commas. Understatement is always the best way to put forward earth-shaking thoughts. Give a detailed literary review.

22. Report concluded results: Use concluded results. From raw data, filter the results, and then conclude your studies based on measurements and observations taken. An appropriate number of decimal places should be used. Parenthetical remarks are prohibited here. Proofread carefully at the final stage. At the end, give an outline to your arguments. Spot perspectives of further study of the subject. Justify your conclusion at the bottom sufficiently, which will probably include examples.

23. Upon conclusion: Once you have concluded your research, the next most important step is to present your findings. Presentation is extremely important as it is the definite medium though which your research is going to be in print for the rest of the crowd. Care should be taken to categorize your thoughts well and present them in a logical and neat manner. A good quality research paper format is essential because it serves to highlight your research paper and bring to light all necessary aspects of your research.

Informal Guidelines of Research Paper Writing

Key points to remember:

- Submit all work in its final form.
- Write your paper in the form which is presented in the guidelines using the template.
- Please note the criteria peer reviewers will use for grading the final paper.

Final points:

One purpose of organizing a research paper is to let people interpret your efforts selectively. The journal requires the following sections, submitted in the order listed, with each section starting on a new page:

The introduction: This will be compiled from reference matter and reflect the design processes or outline of basis that directed you to make a study. As you carry out the process of study, the method and process section will be constructed like that. The results segment will show related statistics in nearly sequential order and direct reviewers to similar intellectual paths throughout the data that you gathered to carry out your study.

The discussion section:

This will provide understanding of the data and projections as to the implications of the results. The use of good quality references throughout the paper will give the effort trustworthiness by representing an alertness to prior workings.

Writing a research paper is not an easy job, no matter how trouble-free the actual research or concept. Practice, excellent preparation, and controlled record-keeping are the only means to make straightforward progression.

General style:

Specific editorial column necessities for compliance of a manuscript will always take over from directions in these general guidelines.

To make a paper clear: Adhere to recommended page limits.

Mistakes to avoid:

- Insertion of a title at the foot of a page with subsequent text on the next page.
- Separating a table, chart, or figure—confine each to a single page.
- Submitting a manuscript with pages out of sequence.
- In every section of your document, use standard writing style, including articles ("a" and "the").
- Keep paying attention to the topic of the paper.
- Use paragraphs to split each significant point (excluding the abstract).
- Align the primary line of each section.
- Present your points in sound order.
- Use present tense to report well-accepted matters.
- Use past tense to describe specific results.
- Do not use familiar wording; don't address the reviewer directly. Don't use slang or superlatives.
- Avoid use of extra pictures—include only those figures essential to presenting results.

Title page:

Choose a revealing title. It should be short and include the name(s) and address(es) of all authors. It should not have acronyms or abbreviations or exceed two printed lines.

Abstract: This summary should be two hundred words or less. It should clearly and briefly explain the key findings reported in the manuscript and must have precise statistics. It should not have acronyms or abbreviations. It should be logical in itself. Do not cite references at this point.

An abstract is a brief, distinct paragraph summary of finished work or work in development. In a minute or less, a reviewer can be taught the foundation behind the study, common approaches to the problem, relevant results, and significant conclusions or new questions.

Write your summary when your paper is completed because how can you write the summary of anything which is not yet written? Wealth of terminology is very essential in abstract. Use comprehensive sentences, and do not sacrifice readability for brevity; you can maintain it succinctly by phrasing sentences so that they provide more than a lone rationale. The author can at this moment go straight to shortening the outcome. Sum up the study with the subsequent elements in any summary. Try to limit the initial two items to no more than one line each.

Reason for writing the article—theory, overall issue, purpose.

- Fundamental goal.
- To-the-point depiction of the research.
- Consequences, including definite statistics—if the consequences are quantitative in nature, account for this; results of any numerical analysis should be reported. Significant conclusions or questions that emerge from the research.

Approach:

- Single section and succinct.
- An outline of the job done is always written in past tense.
- Concentrate on shortening results—limit background information to a verdict or two.
- Exact spelling, clarity of sentences and phrases, and appropriate reporting of quantities (proper units, important statistics) are just as significant in an abstract as they are anywhere else.

Introduction:

The introduction should "introduce" the manuscript. The reviewer should be presented with sufficient background information to be capable of comprehending and calculating the purpose of your study without having to refer to other works. The basis for the study should be offered. Give the most important references, but avoid making a comprehensive appraisal of the topic. Describe the problem visibly. If the problem is not acknowledged in a logical, reasonable way, the reviewer will give no attention to your results. Speak in common terms about techniques used to explain the problem, if needed, but do not present any particulars about the protocols here.

The following approach can create a valuable beginning:

- Explain the value (significance) of the study.
- Defend the model—why did you employ this particular system or method? What is its compensation? Remark upon its appropriateness from an abstract point of view as well as pointing out sensible reasons for using it.
- Present a justification. State your particular theory(-ies) or aim(s), and describe the logic that led you to choose them.
- Briefly explain the study's tentative purpose and how it meets the declared objectives.

Approach:

Use past tense except for when referring to recognized facts. After all, the manuscript will be submitted after the entire job is done. Sort out your thoughts; manufacture one key point for every section. If you make the four points listed above, you will need at least four paragraphs. Present surrounding information only when it is necessary to support a situation. The reviewer does not desire to read everything you know about a topic. Shape the theory specifically—do not take a broad view.

As always, give awareness to spelling, simplicity, and correctness of sentences and phrases.

Procedures (methods and materials):

This part is supposed to be the easiest to carve if you have good skills. A soundly written procedures segment allows a capable scientist to replicate your results. Present precise information about your supplies. The suppliers and clarity of reagents can be helpful bits of information. Present methods in sequential order, but linked methodologies can be grouped as a segment. Be concise when relating the protocols. Attempt to give the least amount of information that would permit another capable scientist to replicate your outcome, but be cautious that vital information is integrated. The use of subheadings is suggested and ought to be synchronized with the results section.

When a technique is used that has been well-described in another section, mention the specific item describing the way, but draw the basic principle while stating the situation. The purpose is to show all particular resources and broad procedures so that another person may use some or all of the methods in one more study or referee the scientific value of your work. It is not to be a step-by-step report of the whole thing you did, nor is a methods section a set of orders.

Materials:

Materials may be reported in part of a section or else they may be recognized along with your measures.

Methods:

- Report the method and not the particulars of each process that engaged the same methodology.
- Describe the method entirely.
- To be succinct, present methods under headings dedicated to specific dealings or groups of measures.
- Simplify—detail how procedures were completed, not how they were performed on a particular day.
- If well-known procedures were used, account for the procedure by name, possibly with a reference, and that's all.

Approach:

It is embarrassing to use vigorous voice when documenting methods without using first person, which would focus the reviewer's interest on the researcher rather than the job. As a result, when writing up the methods, most authors use third person passive voice.

Use standard style in this and every other part of the paper—avoid familiar lists, and use full sentences.

What to keep away from:

- Resources and methods are not a set of information.
- Skip all descriptive information and surroundings—save it for the argument.
- Leave out information that is immaterial to a third party.

Results:

The principle of a results segment is to present and demonstrate your conclusion. Create this part as entirely objective details of the outcome, and save all understanding for the discussion.

The page length of this segment is set by the sum and types of data to be reported. Use statistics and tables, if suitable, to present consequences most efficiently.

You must clearly differentiate material which would usually be incorporated in a study editorial from any unprocessed data or additional appendix matter that would not be available. In fact, such matters should not be submitted at all except if requested by the instructor.

Content:

- Sum up your conclusions in text and demonstrate them, if suitable, with figures and tables.
- In the manuscript, explain each of your consequences, and point the reader to remarks that are most appropriate.
- Present a background, such as by describing the question that was addressed by creation of an exacting study.
- Explain results of control experiments and give remarks that are not accessible in a prescribed figure or table, if appropriate.
- Examine your data, then prepare the analyzed (transformed) data in the form of a figure (graph), table, or manuscript.

What to stay away from:

- Do not discuss or infer your outcome, report surrounding information, or try to explain anything.
- Do not include raw data or intermediate calculations in a research manuscript.
- Do not present similar data more than once.
- A manuscript should complement any figures or tables, not duplicate information.
- Never confuse figures with tables—there is a difference.

Approach:

As always, use past tense when you submit your results, and put the whole thing in a reasonable order.

Put figures and tables, appropriately numbered, in order at the end of the report.

If you desire, you may place your figures and tables properly within the text of your results section.

Figures and tables:

If you put figures and tables at the end of some details, make certain that they are visibly distinguished from any attached appendix materials, such as raw facts. Whatever the position, each table must be titled, numbered one after the other, and include a heading. All figures and tables must be divided from the text.

Discussion:

The discussion is expected to be the trickiest segment to write. A lot of papers submitted to the journal are discarded based on problems with the discussion. There is no rule for how long an argument should be.

Position your understanding of the outcome visibly to lead the reviewer through your conclusions, and then finish the paper with a summing up of the implications of the study. The purpose here is to offer an understanding of your results and support all of your conclusions, using facts from your research and generally accepted information, if suitable. The implication of results should be fully described.

Infer your data in the conversation in suitable depth. This means that when you clarify an observable fact, you must explain mechanisms that may account for the observation. If your results vary from your prospect, make clear why that may have happened. If your results agree, then explain the theory that the proof supported. It is never suitable to just state that the data approved the prospect, and let it drop at that. Make a decision as to whether each premise is supported or discarded or if you cannot make a conclusion with assurance. Do not just dismiss a study or part of a study as "uncertain."

Research papers are not acknowledged if the work is imperfect. Draw what conclusions you can based upon the results that you have, and take care of the study as a finished work.

- You may propose future guidelines, such as how an experiment might be personalized to accomplish a new idea.
- Give details of all of your remarks as much as possible, focusing on mechanisms.
- Make a decision as to whether the tentative design sufficiently addressed the theory and whether or not it was correctly restricted. Try to present substitute explanations if they are sensible alternatives.
- One piece of research will not counter an overall question, so maintain the large picture in mind. Where do you go next? The best studies unlock new avenues of study. What questions remain?
- Recommendations for detailed papers will offer supplementary suggestions.

Approach:

When you refer to information, differentiate data generated by your own studies from other available information. Present work done by specific persons (including you) in past tense.

Describe generally acknowledged facts and main beliefs in present tense.

The Administration Rules

Administration Rules to Be Strictly Followed before Submitting Your Research Paper to Global Journals Inc.

Please read the following rules and regulations carefully before submitting your research paper to Global Journals Inc. to avoid rejection.

Segment draft and final research paper: You have to strictly follow the template of a research paper, failing which your paper may get rejected. You are expected to write each part of the paper wholly on your own. The peer reviewers need to identify your own perspective of the concepts in your own terms. Please do not extract straight from any other source, and do not rephrase someone else's analysis. Do not allow anyone else to proofread your manuscript.

Written material: You may discuss this with your guides and key sources. Do not copy anyone else's paper, even if this is only imitation, otherwise it will be rejected on the grounds of plagiarism, which is illegal. Various methods to avoid plagiarism are strictly applied by us to every paper, and, if found guilty, you may be blacklisted, which could affect your career adversely. To guard yourself and others from possible illegal use, please do not permit anyone to use or even read your paper and file.

Criterion for Grading a Research Paper (Compilation) by Global Journals

Please note that following table is only a Grading of "Paper Compilation" and not on "Performed/Stated Research" whose grading solely depends on Individual Assigned Peer Reviewer and Editorial Board Member. These can be available only on request and after decision of Paper. This report will be the property of Global Journals.

Topics	Grades		
	A-B	**C-D**	**E-F**
Abstract	Clear and concise with appropriate content, Correct format. 200 words or below	Unclear summary and no specific data, Incorrect form Above 200 words	No specific data with ambiguous information Above 250 words
Introduction	Containing all background details with clear goal and appropriate details, flow specification, no grammar and spelling mistake, well organized sentence and paragraph, reference cited	Unclear and confusing data, appropriate format, grammar and spelling errors with unorganized matter	Out of place depth and content, hazy format
Methods and Procedures	Clear and to the point with well arranged paragraph, precision and accuracy of facts and figures, well organized subheads	Difficult to comprehend with embarrassed text, too much explanation but completed	Incorrect and unorganized structure with hazy meaning
Result	Well organized, Clear and specific, Correct units with precision, correct data, well structuring of paragraph, no grammar and spelling mistake	Complete and embarrassed text, difficult to comprehend	Irregular format with wrong facts and figures
Discussion	Well organized, meaningful specification, sound conclusion, logical and concise explanation, highly structured paragraph reference cited	Wordy, unclear conclusion, spurious	Conclusion is not cited, unorganized, difficult to comprehend
References	Complete and correct format, well organized	Beside the point, Incomplete	Wrong format and structuring

INDEX

save our planet

Global Journal of Medical Research

Visit us on the Web at www.GlobalJournals.org | www.MedicalResearchJournal.org
or email us at helpdesk@globaljournals.org

ISSN 9755896