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Teratome Mature Cancerise

Human Preimplantation Embryos

Highlights

Chromosomal Characteristics

Trophoblastiques Gestationnelles

Discovering Thoughts, Inventing Future

VOLUME 15 ISSUE 3 VERSION 1.0

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Contents of the Issue

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Teratome Mature Cancerise De L'ovaire : A Propos D'un Cas Et Revue De La Litterature

By Mounia Ziyadi, Ihssane Hakim, Khalid Guelzim, Jaouad Kouach, Driss Moussaoui & Mhammed Dehayni

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Resume- La dégénérescence d'un kyste dermoide est une complication rare 1% à 2 %, aucun signe clinique, radiologique ou biologique n'est spécifique, survient habituellement en peri ménopause, le traitement est chirurgical et analogue à celui des tumeurs épithéliales de l'ovaire. Le pronostic dépend du grade, de l'invasion vasculaire, de l'effraction de la capsule ovarienne ainsi que du type histologique .Nous rapportons un cas d'un carcinome épidermoïde de l'ovaire développé sur un tératome mature kystique chez une patiente ménopausée.

Mots Clés: tératome ovarien cancérisé, rare, péri et post ménopause, traitement chirurgical.

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Teratome Mature Cancerise De L'ovaire : A Propos D'un Cas Et Revue De La Litterature

The Mature Teratoma Cancerise of the Ovary: About a Case and Review of the Literature

Mounia Ziyadi [α], Ihssane Hakim [σ], Khalid Guelzim [ρ], Jaouad Kouach [ω], Driss Moussaoui [¥] & Mhammed Dehayni [§]

Resume- La dégénérescence d'un kyste dermoide est une complication rare 1% à 2 %, aucun signe clinique, radiologique ou biologique n'est spécifique, survient habituellement en peri ménopause, le traitement est chirurgical et analogue à celui des tumeurs épithéliales de l'ovaire. Le pronostic dépend du grade, de l'invasion vasculaire, de l'effraction de la capsule ovarienne ainsi que du type histologique .Nous rapportons un cas d'un carcinome épidermoïde de l'ovaire développé sur un tératome mature kystique chez une patiente ménopausée.

Mots Clés: tératome ovarien cancérisé, rare, péri et post ménopause, traitement chirurgical.

Abstract- Malignant transformation of mature cystic teratoma of the ovary is a rare complication. No clinical nor radiological, nor biological signs are specific to malignant transformation, occurring preferentially during per-and post-menopausal, the treatment is surgical and the same of epithelial tumors of the ovary, the prognosis depends on the grade, the vascular invasion, burglary of ovarian capsule and the histological type. We report one case of squamous cell carcinoma developed on a mature cystic teratoma of the ovary in a menopausal woman.

I. Introduction

Le tératome mature et kystique de l'ovaire est la tumeur germinale la plus fréquente, sa transformation maligne est une complication peu fréquente s'observant dans environ 1 à 2 % des cas [1]. Cette cancérisation se fait le plus souvent sous forme de carcinome épidermoïde dans 83%, exceptionnellement en mélanome ou sarcome [2]. Survenant préférentiellement en période péri- et post ménopausique [3]. Aucun signe clinique, radiologique ou biologique n'est spécifique à cette transformation maligne. Le traitement est chirurgical et analogue à celui des tumeurs épithéliales de l'ovaire. Nous rapportons une observation d'un carcinome épidermoïde développé sur un tératome mature kystique chez une patiente de 50 ans ayant consulté au service de gynécologie obstétrique de l'hôpital militaire de Rabat.

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II. Observation

Il s'agit de madame B .F âgée de 50 ans, multipare, ménopausée depuis dix ans, sans antécédent pathologique particulier, ayant consulté pour des douleurs pelviennes depuis 2 mois avec augmentation progressif du volume abdominal sans métrorragies ni signe urinaire ou digestif associés, l'examen clinique ayant révélé une masse abdomino pelvienne faisant 15 cm rénitente, l' échographie pelvienne a montré une masse pelvienne solido-kystique faisant 17cm /13 cm, un complément scanographiques ayant objectivé une lésion de densité mixte contenant de niveaux hydro-aériques avec calcification intra lésionnelle en faveur d'un kyste dermoide mesurant 16cm /11cm /13cm, sans épanchement ni adénopathie visibles ;la patiente a benificié d'une annexectomie gauche, à l'examen macroscopique c'était une formation kystique rompue mesurant 14cm /10 cm à surface externe lisse, à la coupe, le contenu est pilosébacé ,la paroi est souvent fine sauf en endroit ou existe une zone charnue siège de remaniement nécrotique, l'examen anatomo-pathologique a conclu en :carcinome épidermoïde moyennement différencié infiltrant ,sans emboles vasculaires sur tératome kystique mono tissulaire de l'ovaire (kyste dermoide cancérisé). une reprise a été faite, le geste a consisté en une hystérectomie totale annexectomie gauche curage ilio obturateur et lomboaortique, l'examen histologique n'a pas montré de résidu tumoral ni de métastase ganglionnaire.

Une chimiothérapie adjuvante a été préconisée chez notre patiente à base de cisplatine et 5 fluorouracile.

III. Discussion

Le tératome mature cancérisé se définit comme étant un kyste dermoide dans lequel se développe un carcinome sur une de ses composantes matures. Il est exclu de cette entité les tératomes mono dermiques cancérisés [4] à savoir les goitres ovariens, les tumeurs carcinoïdes ainsi que les tumeurs germinales primitives occasionnellement associées au kyste dermoide [5].

Environ 1 à 2 % des tératomes matures se transforment en cancer et cette association ne représente que 0,17 à 1 % de l'ensemble des carcinomes ovariens [6].

Plus de 75 % des cas de kyste dermoide cancérisé sont observés en post ménopausique [5], avec un âge moyen de 51-62 ans [6], l'âge de notre patiente est de 50 ans.

Le risque de transformation maligne d'un kyste dermoide augmente avec l'âge, ainsi une femme de 70 ans à 15 % de risque que son kyste dermoïde cancérise [7] ; ce risque est presque nul au cours des 2 premières décades.

La présentation clinique est non spécifique varie en fonction du stade tumoral et est superposable à celle des kystes ovariens bénins incluant une pesanteur et des douleurs pelviennes, une distension abdominale, une dyspareunie, des troubles du transit et de la miction, et une ascite.

Sur le plan radiologique, certains auteurs proposent comme signes pouvant évoquer la malignité, l'adhérence aux structures de voisinage, la présence de nodules, l'augmentation de l'épaisseur de la paroi par endroits et la présence de plages de nécrose et d'hémorragie [8]. Figure 1 et 2

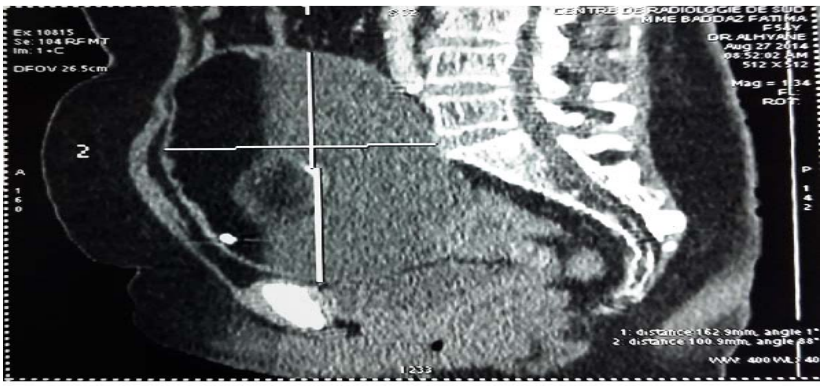

Figure 1: coupe sagittale montrant une lésion de densité mixte contenant un niveau hydroaerique avec calcification intra lésionnelle

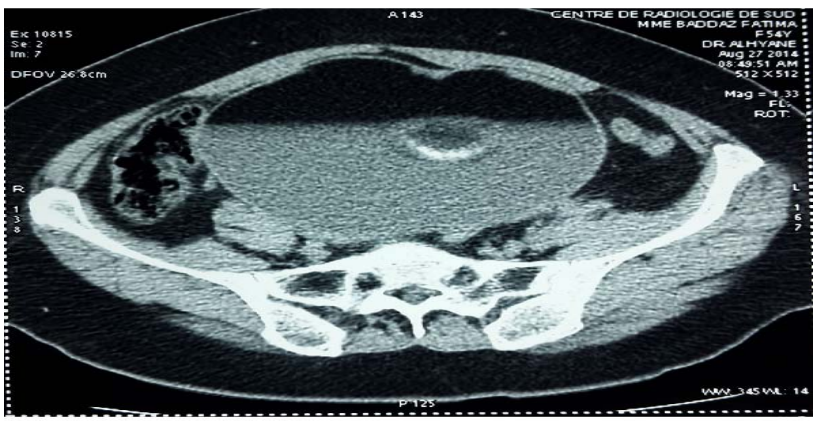

Figure 2 : coupe transversale montrant une lésion de densité mixte avec ses rapports avec les organes de voisinage

Certaines études ont montré l'utilité de certains marqueurs sériques notamment le SCCA (squamous cell carcinoma antigen) dans le diagnostic pré opératoire des transformations malignes des kystes dermoïdes de l'ovaire et dans la détection précoce des récidives [8], [9], [10] and [11]. Cependant, un taux faible de SCC ne permet pas d'éliminer formellement un tératome cancérisé.

Quoique la malignité peut être suspectée sur des critères peropératoire telles que : l'âge supérieur à 40 ans, la taille tumorale qui peut atteindre 20 cm et la présence de l'hémorragie et la nécrose, seule l'étude anatomo-pathologique confirme la dégénérescence du kyste dermoide.

Tous les types histologiques peuvent exister, Citons par ordre de fréquence décroissante : adénocarcinome, carcinome adénosquameux, carcinome indifférencié, carcinome à petites cellules, sarcomes, mélanome considéré comme primitif en absence d'une localisation secondaire et en présence d'une activité Jonctionnelle [5]. Le carcinome basocellulaire et le lymphome peuvent rarement survenir Le traitement est le même que celui d'un cancer ovarien associant une chirurgie première et une chimiothérapie ou radiothérapie adjuvante. La survie à 5 ans est de 77 % pour le stade I et seulement 11 % pour les stades avancés [3].

Le pronostic dépend du grade, de l'invasion vasculaire, de l'effraction de la capsule ovarienne [11] ainsi que du type histologique. Pour établir un pronostic, Kikkawa *et al*. prennent en considération aussi la présence ou non de résidu tumoral.

Ainsi la survie à 5 ans est de 79 % sans résidu tumoral et de 10,1 % avec résidu tumoral [12].

IV. Conclusion

Le tératome mature cancérisé est un phénomène bien connu mais rare.il faut y penser surtout devant un kyste dermoïde dont la taille est plus grande que les kystes habituels, en particulier chez une femme âgées .le pronostic du scc reste meilleur par rapport à l'adénocarcinome ou le sarcome

Conflit D'interet

Les auteurs ne rapportent aucun conflit d'intérêt

Contributions Des Auteurs

Mounia Ziyadi a participé à la prise en charge de la patiente et a rédigé l'article. Hakimi ihsane a participé à la prise en charge de la patiente et lecture l'article, Khalid Guelzim, Jawad Kouach, Driss Rahali Moussaoui, Mhammed Dehayni ont participé à la prise en charge de la patiente.

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Les Maladies Trophoblastiques Gestationnelles : Etude Prospective a Propos De 36CAS

By H. Ramsiss, M. Sebti, M. Yousfi, S. Amrani, A. Ragala, MA. Benyahia & S. Bargach

Resume- Les maladies trophoblastiques correspondent à un groupe très hétérogène de pathologies rares, potentiellement agressives, chez les femmes jeunes désireuses de grossesses ultérieures.

Le présent travail représente une étude prospective portant sur les cas de maladies trophoblastiques colligés au service de gynécologie obstétrique cancérologie et grossesse à haut risque de la maternité SOUISSI sur une période de 30 mois. Le but de notre travail est de rapporter le profil épidémiologique, clinique, thérapeutique et évolutif de cette entité pathologique.

Nous avons recense 36 cas de môle hydatiforme ; parmi 10475 accouchements et 787 avortements spontanés, ce qui donne une fréquence de 1/290 accouchements et 4.6 % des avortements. La moyenne d'âge était de 33 ans (extrêmes 17-57 ans).

Mots Clés: maladies trophoblastiques; tumeurs trophob-lastiques; βhCG; chimiothérapie.

GJMR-E Classification : NLMC Code: WJ 190

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Mots Clés: maladies trophoblastiques; tumeurs trophoblastiques; βhCG; chimiothérapie.

Abstract- The trophoblastiques diseases correspond to a very diverse group of rare, potentially aggressive pathologies, at the young women avid for later pregnancies. The present work represents a prospective study concerning the cases of trophoblastiques diseases observed in the maternity SOUISSI over a period of 30 months. The purpose of our workis to report the epidemiological, clinical, therapeutic and evolutionary profile of this pathologicalentity. We have list count 36 cases of hydatiforme mole; among 10475 deliveries) and 787 miscarriages, what gives a frequency of 1/290 deliveries and 4.6 % of abortions. The average of age was 33 years (17-57 years). The multiparity was found in 30 % of the cases. The diagnosiswas put in the first trimèstrepregnancy to twothirds of the patients. The motive for consultation was métrorragies to 84 % of the cases associates in pelviennes pains in 43 % of the cases; the toxic syndrome was present at 13 % of the patients. The diagnosis was evoked on the clinic, échographic and biologic and confirmed by the anatomopathologique studyin 86 % of the cases. The treatment consisted in an endo-utérineaspiration with a follow-up of the diminution of βhCG. 68 % of the patients had a favorable evolution. 32 % of the cases had evolved towards trophoblastiques tumors which were all of low risk. The evolution was favorable for the majority of them under chemotherapy.

Keywords: trophoblastiques diseases; trophoblastiques tumors; βhCG; chemotherapy.

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I. Introduction

Hippocrate était probablement le premier à décrire la maladie trophoblastique gestationnelle autour de 400 av. J-C dans sa description d'hydropisie de l'utérus [1]. Bien que d'autres observations aient été faites depuis, Marchand était le premier qui a associé la môle hydatidiforme avec la grossesse en 1895. C'est un groupe très hétérogène de pathologies rares. Il s'agit, pour la plupart, de pathologies d'excellent pronostic, très chimiosensibles.

Nous rapportons une série de 36 observations de maladies trophoblastiques. Nous allons présenter nos résultats, insistés sur les modalités diagnostiques et thérapeutiques, ainsi que les moyens de surveillance et l'évolution.

II. Matériel et Méthodes D'étude

Notre travail est une étude prospective étalée sur une période de 30 mois, allant de Janvier 2012 à juin 2014, et portant sur 36 cas de maladies trophoblastiques gestationnelles colligées au service de gynécologie obstétrique cancérologie et grossesse à haut risque de la maternité Souissi. Les critères d'inclusion étaient les suivants : toutes les môles évoquées cliniquement et échographiquement puis confirmées à l'examen anatomo-pathologique. Nous avons relevé les caractéristiques des patientes, les modalités diagnostiques et thérapeutiques ainsi que le suivi post-môlaire.

III. Résultats

a) L'incidence

Durant la période d'inclusion des malades nous avons admis 10475 femmes pour accouchements, et 787 patientes pour avortements spontanés avec expulsion spontanée ou ayant nécessité un curetage. Pendant la même période, nous avant recensé 36 cas

de maladies trophoblastiques gestationnelles soit une fréquence 1/290 accouchements et 4.6% avortements.

b) Caractéristiques des patientes

La tranche d'âge entre 20 et 29 ans était la plus concernée (47%) suivie de celle de 40-49ans avec 27%. La moyenne d'âge était de 33ans, avec des extrêmes de 17 à 57ans.

L'élévation de la fréquence des grossesses molaires parallèlement à l'augmentation de la parité est presque toujours rapportée ; Nous notons un pic de fréquence chez les multipares (30%), cependant la proportion des nullipares était élevée (19%).

Nous avons relevé l'antécédent d'un avortement antérieur dans 12cas, et 2 avortements dans un cas ; aucune patiente n'avait d'antécédent de môle hydatiforme.

47% de nos patientes avaient un groupe sanguin O, 31% un groupe A et 14% un groupe B. Ces différences ne sont pas significatives par rapport à la population générale. Trois patientes sont rhésus négatif, l'immunoglobuline anti-D était prescrite.

c) Diagnostic

Le motif de consultation était des métrorragies chez 84% des cas. Les métrorragies étaient de grande abondance chez deux cas nécessitant une prise en charge urgente et une transfusion en culots globulaires. 43% patientes avaient présenté des douleurs pelviennes et 13% des cas des signes sympathiques exagérés de grossesse. Deux femmes étaient admises dans un contexte fébrile et quatre cas étaient diagnostiqués fortuitement à l'échographie.

L'âge gestationnel au moment du diagnostic variait de 6 à 24 semaines d'aménorrhée avec une moyenne de 11 semaines. Le diagnostic était posé au premier trimestre chez les deux tiers des patientes.

L'examen physique retrouvait un gros utérus dépassant l'âge théorique de la grossesse dans 95% des cas, et une masse latéroutérine uni ou bilatérale dans 11% des cas. L'échographie montrait un utérus augmenté de taille siège d'un matériel hétérogène en « flocons de neige » ou en « grappes de raisin » chez 95% des patientes associé à un sac gestationnel sans embryon chez trois d'entre elles. On a retrouvé chez une patiente une grossesse arrêtée à 9 SA avec un placenta hypertrophié hétérogène dont l'étude anatomopathologique était en faveur d'une môle partielle. Les kystes lutéiniques étaient présents chez 11% des cas, leurs tailles variaient de 6 à 10cm. Les βhCG plasmatiques étaient mesurés chez toutes les patientes. Leurs taux initial variaient de 6900 à 1352000 UI/L. 73% des cas avaient un taux supérieur à 105UI/ml (69% des môles complètes, 25% des môles partielles). La numération formule sanguine montrait une anémie chez 40 % de nos patientes.

d) Traitement

Le traitement de base de toute môle repose sur l'évacuation utérine par aspiration avec vérification de la vacuité utérine à l'aide d'une échographie per-opératoire, sous perfusion d'ocytociques et couverture antibiotique. Ce geste était réalisé pour toutes nos patientes ; nous n'avions pas notés de perforation utérine.

Un contrôle échographique systématique s'effectuait après l'aspiration, généralement au 10ème jour. Il avait montré un utérus vide chez 67% des cas et une rétention (diamètre antéropostérieur supérieu≥ à 17 mm), dans 28% des cas. Ces dernières ont bénéficié d'une deuxième aspiration qui avait assuré la vacuité utérine.

L'étude anatomopathologique du produit d'aspiration avait retrouvé 43% de môles complètes, et 43% de môles partielles. Elle n'était pas concluante dans quatre cas.

e) Évolution

Chez 68% patientes, le suivi régulier avait montré une négativation des βhGC entre 6 et 10 semaines. 32% des patientes avaient présenté une évolution perturbée des βhCG plasmatiques alors que la majorité d'entre elles étaient asymptomatiques. Elles étaient considérées comme des tumeurs trophoblastiques gestationnelles selon les critères proposés en 2000 par le FIGO. On avait procédé à la réalisation d'un bilan d'extension. Au terme de ce bilan on avait calculé le score selon la classification pronostique FIGO. Toutes nos patientes étaient à bas risque (score ≤ 6) et elles n'avaient pas de métastases. On avait opté pour une mono-chimiothérapie à base de méthotrexate (Une injection IM de 0.4 mg/kg/j pendant cinq jours), en fonction de la tolérance, le rythme était bimensuel ; et ce jusqu'à normalisation des βhCG en rajoutant deux cures après négativation. Nous avons obtenu un taux de rémission complète de 97%. Chez une patiente, les βhCG se sont négativés pendant 9mois puis on avait constaté une ascension rapide de leur taux à plus de 105 U/l. L'échodoppler pelvien était en faveur d'une môle invasive ou choriocacinome sans métastases au bilan d'extension. La patiente avait reçue quatre cures de polychimiothérapie à base d'EMACO. Elle est actuellement à un an de surveillance après négativation des βhCG.

Toutes nos patientes étaient sensibilisées de l'importance d'une contraception efficace durant la période de surveillance. Le moyen choisi dans notre service est la contraception hormonale oestro-progestative ; La grossesse n'est autorisée qu'à la fin de la surveillance selon les recommandations de la FIGO. On avait noté trois grossesses, deux après une grossesse môlaire et une après une tumeur trophoblastique gestationnelle. Deux grossesses étaient

menées à terme sans incidents et la troisième est en cours.

IV. Commentaire et Discussion

Les maladies trophoblastiques gestationnelles comprennent un large spectre de pathologies du placenta, allant des lésions bénignes précancéreuses (les môles hydatiformes complètes ou partielles), aux tumeurs trophoblastiques gestationnelles (principalement les môles invasives, les choriocarcinomes et les tumeurs du site d'implantation).

Chaque entité pathologique se caractérise par sa particularité clinique, radiologique, anatomopathologique, ainsi que son profil immuno-histochimique et cytogénétique.

Les môles hydatiformes complètes sont généralement diploïdes et se singularisent par une dégénérescence hydropique de toutes les villosités avec prolifération plus ou moins marquée des cellules trophoblastiques. Elles ont une tendance vers une évolution précancéreuse. Les môles partielles sont la plupart du temps triploïdes, les vésicules môlaires sont mêlées à des villosités normales. On peut retrouver des tissus embryonnaires, voire un embryon avec activité cardiaque. Son évolution est le plus souvent favorable. [2].

Dans la môle invasive, les vésicules môlaires envahissent le myomètre et réalisent une tumeur dissociant la paroi utérine. Le choriocarcinome est une prolifération maligne de cellules trophoblastiques villeuses sans formation de villosités placentaires. La nécrose, l'hémorragie, la colonisation vasculaire avec diffusion métastatique contribuent à son mauvais pronostic. La tumeur du site d'implantation placentaire, nettement plus rare, est une prolifération des cellules trophoblastiques extra-villeuses particulières par leur sécrétion en hormone lactogène placentaire.

a) Incidence

La fréquence de la môle hydatiforme varie de manière importante entre les races et les pays. Dans notre série la fréquence était de 1/283 accouchements, ce qui nous classe dans un rang de haute prévalence à coté des pays Asiatiques [3].

La majorité des études épidémiologiques tendent à démontrer que le risque relatif évolue sous la forme d'une courbe en « J » avec l'âge et la parité, et ce quelle que soit l'ethnicité et le pays. Le risque est plus élevé pour les femmes avant l'âge de 20 ans et après l'âge de 40 ans comparativement aux femmes entre 20 et 35 ans, ceci peut être expliqué par des facteurs génétiques, notamment par le vieillissement de l'ovocyte, par déficit en carotène et en vitamine A, qui favorisent les anomalies de fécondation et par une moindre réaction immunologique maternelle [4].

On peut situer le risque de récidive autour de 1% après une môle hydatiforme et de 11 à 30 % après deux môles complète [2]. La relation entre groupe sanguin et maladies trophoblastiques reste encore un domaine de recherche, puisque jusqu'à présent aucune explication n'est défendable.

Les facteurs de risque connus des môles hydatiformes complètes, notamment l'âge maternel supérieur à 40 ans, la susceptibilité familiale et le groupe sanguin A, ne sont pas retrouvés dans les môles partielles. Le pourcentage important des môles partielles dans notre étude (43%) pourrait expliquer la discordance de nos résultats avec ceux de la littérature concernant l'âge, la parité et le groupage sanguin des patientes.

b) Diagnostic

Les signes classiques de la môle apparaissent souvent après le premier trimestre comme les vomissements incoercibles (20 à 30% des cas), la prééclampsie (20 à 30% des cas), l'hyperthyroïdie (7% des cas) et l'insuffisance respiratoire (2% des cas). La môle complète est souvent plus symptomatique que la môle partielle dont les signes peuvent mimer un avortement spontané [5]. L'âge gestationnel moyen de diagnostic est d'environ 12 semaines d'aménorrhées [6].

De nos jours, le diagnostic est presque toujours porté devant des métrorragies avant l'apparition des autres signes cliniques. L'utilisation de l'échographie constitue un progrès réel dans le diagnostic de môle hydatiforme. L'image classique de la môle complète est celle en grappes de raisins occupant totalité de la cavité utérine sans association à une structure embryonnaire ou foetale. Les signes échographiques de la môle partielle sont plus discrets, n'atteignant qu'une partie du trophoblaste ; et il existe fréquemment des reliquats foetaux sans augmentation exagérée de la taille de l'utérus. L'échographique doppler peut retrouver une vitesse du pic systolique élevée et des index de résistance et de pulsatilité bas des artères utérines. Mais le rôle du doppler est limité et n'aura d'intérêt clinique qu'en cas de môle invasive.

Les cellules trophoblastiques sécrètent l'hormone gonadrophine chorionique (hCG) qui sert de marqueur de la présence de tissu trophoblastique. Une valeur élevée de βhCG sérique au moment de l'échographie oriente le diagnostic vers une môle complète précoce. Le diagnostic définitif nécessite une confirmation par l'anatomopathologiste [7].

Dans notre étude, toutes les patientes ont bénéficié d'un dosage de βhCG, qui était élevé chez toutes les patientes avec des extrêmes de 6889 et 1123570UI/ml. Le taux était supérieur à 105UI/ml pour 69% des môles complètes, et 25% des môles partielles.

c) Traitement

La prise en charge thérapeutique des môles fait appel, dans la très grande majorité des cas, à une évacuation utérine par aspiration et à la surveillance

ultérieure du taux sérique d'hCG. Les recommandations de la FIGO publiées en 2006 signalent la possibilité de réaliser en fin d'aspiration un curetage prudent avec une curette tranchante, afin de vérifier la vacuité utérine. L'évacuation utérine doit être programmée aussi rapidement que possible compte tenu du fait que les complications augmentent avec l'âge gestationnel de la grossesse môlaire après 18 semaines d'aménorrhée [8]. Un suivi soigneux est essentiel après l'évacuation d'une grossesse môlaire, pour identifier les patientes à risque d'évoluer vers une tumeur trophoblastique. Une échographie pelvienne est envisagée après deux semaines pour éliminer une rétention des tissus trophoblastique. La réalisation d'échographies pelviennes endovaginales supplémentaires est recommandée en cas de reprise des saignements et/ou de l'évolution anormale des βhCG. Un dosage hebdomadaire de βhCG totale sérique est recommandé jusqu'à négativation confirmée sur trois dosages successifs puis un suivi mensuel pendant six à 12mois.

Dans notre étude, 68% des môles avaient une évolution favorable dont 61.5% était des môles partielles. 32% avait évolué vers des tumeurs trophoblastiques qu'étaient toutes de bas risque. Ils ont bien évolué sous chimiothérapie.

Actuellement, quelques indications chirurgicales persistent, notamment chez femmes ayant accomplis leurs projet parental, pour limiter les récidives des tumeurs trophoblastiques à haut risque métastatique, pour assurer l'hémostase en cas de complications hémorragiques graves et en cas de tumeur du site d'implantation. La modalité du traitement chirurgical la plus commune est l'hystérectomie totale interannexielle. Les tumeurs trophoblastiques n'étant pas hormono-dépendante et les métastases ovariennes étant rares, les ovaires pourront être conservés selon l'âge des patientes. Dans notre série, on n'avait pas réalisé d'hystérectomie.

V. Pronostic et Conclusion

Les maladies trophoblastiques ont le plus souvent une évolution favorable, elles n'interfèrent pas dans l'avenir obstétrical de la femme, quoi qu'elles exposent à un risque important de récidive de la môle. Le taux global de rémission est de 80 à 95 % selon la littérature, sous réserve d'un suivi rigoureux selon des protocoles bien établis. La création un centre de référence de maladies trophoblastiques au Maroc à l'instar des centres existants déjà dans d'autres pays, pourrait apporter une aide à la décision aux médecins et de constituer une garantie de la qualité des stratégies proposées aux patientes. L'enregistrement de l'ensemble des maladies trophoblastiques permettrait ainsi d'avoir un registre à l'échelon national et les travaux de recherche clinique dans ce domaine en serait facilité.

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Chromosomal Characteristics of Human Preimplantation Embryos Assess by Comparative Genomic Hybridization

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Introduction- In recent years, more women are getting married and starting a family at an older age. Advanced maternal age (AMA) is defined as age 35 years or more for the mother. This group has been observed to have a high risk of chromosomal abnormalities in their embryos during pregnancy because the quality of oocytes correlate with maternal age and corresponding reproductive clinical outcomes (1). In 2013, Harton et al. reported that higher maternal age appears to be associated with increased risk of aneuploidy in embryos :<35 yrs (53.1%), 35-37 yrs (68.2%), 38-40 yrs (73.7%), 41-42 yrs (85.8%), >42 yrs (92.6%) from 451 blastomeres and <35 yrs (31.7%), 35-37 yrs (44.2%), 38-40 yrs (43.1%), 41-42 yrs (76.3%), >42 yrs (84.8%) from 462 blastocysts (2). Moreover, Menken et al. reported on the effects of maternal age on fertility with a decrease in birth rates when maternal age is >/= 35 yrs (3). For this reason, assisted reproductive technology (ART) and preimplantation genetic screening (PGS) can be help to infertile couples and patients at high risk of there being chromosome abnormalities in the embryo. PGS is the technology used for screening chromosome abnormalities to selectively transfer euploid embryos in IVF. Patients using PGS have a higher implantation rate and pregnancy rate compared to those using morphological assessment of embryos alone (4–10).

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Chromosomal Characteristics of Human Preimplantation Embryos Assess by Comparative Genomic Hybridization

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I. Introduction

In recent years, more women are getting married and starting a family at an older age. Advanced maternal age (AMA) is defined as age 35 years or more for the mother. This group has been observed to have a high risk of chromosomal abnormalities in their embryos during pregnancy because the quality of oocytes correlate with maternal age and corresponding reproductive clinical outcomes (1). In 2013, Harton et al. reported that higher maternal age appears to be associated with increased risk of aneuploidy in embryos :<35 yrs (53.1%), 35-37 yrs (68.2%), 38-40 yrs (73.7%), 41-42 yrs (85.8%), >42 yrs (92.6%) from 451 blastomeres and <35 yrs (31.7%), 35-37 yrs (44.2%), 38-40 yrs (43.1%), 41-42 yrs (76.3%), >42 yrs (84.8%) from 462 blastocysts (2). Moreover, Menken et al. reported on the effects of maternal age on fertility with a decrease in birth rates when maternal age is >/= 35 yrs(3). For this reason, assisted reproductive technology (ART) and preimplantation genetic screening (PGS)can be help to infertile couples and patients at high risk of there being chromosome abnormalities in the embryo. PGS is the technology used for screening chromosome abnormalities to selectively transfer euploid embryos in IVF. Patients using PGS have a higher implantation rate and pregnancy rate compared to those using morphological assessment of embryos alone (4–10). However, Schoolcraft et al. and Forman et al. reported that PGS improved implantation rates but did not improve pregnancy rates (8, 9).

The European Society of Human Reproduction and Embryology (ESHRE) Preimplantation Genetic Diagnosis (PGD) consortium data collection XIIshowed cumulative data from 1999 to 2010 and found that the greatest indication of infertility in couples using PGS was AMA (32%)and the most commonly used method of biopsy was cleavage stage (blastomere) aspiration (82%)(11).The advantage of blastomere biopsy was that chromosome abnormality screening can be performed within 2 days for fresh embryo transfer in the blastocyst stage (12).The main problem with blastomere biopsy was chromosome mosaicism. This is the phenomenon in which two or more kinds of genetically different cell populations are present within the same embryo. The mosaicism rate of blastomeres tends to vary from 18% to 57% (13,14). The biopsy of two cells from a blastomere may give increased accuracy but the biopsy of a single cell was associated with superior clinical outcome when compared with the two cell biopsy (15,16). Therefore, the biopsy of a single cell was recommended by ESHRE (17). Blastocyst biopsy is another approach where 5-10 cells of trophectoderm (TE) cells are biopsied with more reliable and accurate results leading to improved clinical outcomes (18–21). Mosaicism is not major problem for blastocyst stage PGS because of the low incidence (20% to 33%) of mosaicism in the blastocyst stage (22–24). A previous study reported that the consistency between inner cell mass (ICM) and TE was 97% to 100% (19, 25). The disadvantage of blastocyst biopsy was the necessity for a short turnaround time in chromosome screening, thus leading to frozen embryo transfer. Even previous study reported that the clinical pregnancy rate of frozen blastocyst transfer was significantly higher than that of fresh blastomere transfer (26).

The method that was previously the gold standard for PGS was fluorescent *in situ* hybridization (FISH) utilizing a probe set of at least 8 chromosomes for aneuploidy screening as recommended by ESHRE (27,28). PGS with FISH analysis did not afford improved clinical outcome in blastomere and TE biopsy(20,29–37). Several factors could have caused the failure of FISH in improving the clinical outcome such as mosaicism, technical limitations and chromosome examination resulting in misdiagnosis (38).

The new technology of high throughput array comparative genomic hybridization (aCGH) is a technique that provides a comprehensive chromosome analysis of the embryo. When compared with FISH, aCGH provides a significantly higher interpretable result (96%) than does FISH (83%) (39). It displays the ability to detect 42% more chromosome errors and 13% more abnormal embryos compared with FISH using probes for 12 chromosomes (40).The reasons for the discordance in the results between FISH and aCGH are

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technical artifact and mosaicism (40). Mir et al. reported the false positive rate on blastomere aCGH to be 2.4 % and the false negative rate could not be detected (41). The error rate of aCGH ranged from 1.9% to 9% depending on the method of whole genome amplification used (40). The purpose of the present study was to investigate the prevalence of chromosome abnormalities of embryos of Asian populations using aCGH techniques.

II. Materials and Methods

This retrospective study was collected data from April 2014 to April 2015. Infertile couples undergoing IVF/ICSI were included into this study however those with known genetic disease were excluded. All cases were approved by the Ethics Committee of Ramathibodi Hospital, Faculty of Medicine, Mahidol University, Thailand. A total of 2,066 embryos from 281 patients were collected and tested using aCGH. All embryos biopsied were either blastomere or trophectoderm. Biopsied cells were load into a 0.2ml sterile microtube. The DNA was generated by whole genome amplification to microgram quantity DNA using half volume SurePlex DNA amplification kits according to the manufacturer's instructions (Illumina, San Diego, CA, USA) and the Sukprasert et al. study (42). Amplified DNA was verified by gel electrophoresis. DNA was labeled and hybridized according to the BlueGnome 24 sure protocol (available at www.cytochip.com). Chromosome copy number variation was analyzed by BlueFuse Multi software (Illumina, San Diego, CA, USA).

III. Results

A total of 2,066 embryos from 281 patients were classified according to embryo stage and maternal age into four groups: group 1 were blastomeres from maternal age < 35yrs; group 2 were blastomeres from maternal age $\geq$ 35yrs; group 3 were blastocysts from maternal age < 35yrs; and group 4 were blastocysts from maternal age $\geq$ 35yrs (Table 1). The maternal age were also divided into younger than 35 years (good prognosis) and older than 35 years (poor prognosis) to study the correlation between maternal age and the euploidy rate of embryos. The average maternal age was 34.79 years and the majority of the embryos were blastomere (87.22%).

Table 1 : The study population

Observations	Blastomere		Trophectoderm		Total
Maternal age	< 35	≥ 35	<35	≥ 35	
Number of maternal	113	137	23	8	281
Number of embryo	874	928	212	52	2066
Average age	30.53	39.13	28.22	39.67	34.79

The efficiency of the whole genome amplification was evaluated by gel electrophoresis. A successful amplification of 96.85 % (2001/2066 embryos) at least 90% for each marker is recommended by ESHRE (43). In addition, PGS with aCGH for screening chromosome aneuploidy in embryos showed the euploidy rate for all embryos was 42.23%. TE had a higher euploidy rate than blastomere especially in the young patient group (70.53%). In the blastomere group, the percentage of abnormal embryos was higher than the percentage of normal embryos for both the good and poor prognosis as shown in Figure 1. Complex chromosome abnormalities (more than one chromosome abnormality) were demonstrated to be the most common abnormalities of this study (66.44%) while monosomy and trisomy were minor (18.16% and 15.40%) as shown in Figure 2, similar to that reported in the Qi et al. study (44). The chromosomes least involved in aneuploidy were chromosomes Y, 8, 6, 12, and 3. We found that the types of aneuploidy in chromosomes were more gains than losses. The chromosomes most involved in aneuploidy were chromosomes 16, 19, 15, 20, and 22 (gain: chromosome 19, 15, 16, 22, and X; loss: chromosome 16, 9, 1, 2, and 20, respectively) as shown in Figure 3.

The data was calculated using SPSS software to compare the results among the four groups. A value of $P < 0.05$ was considered statistically significant.

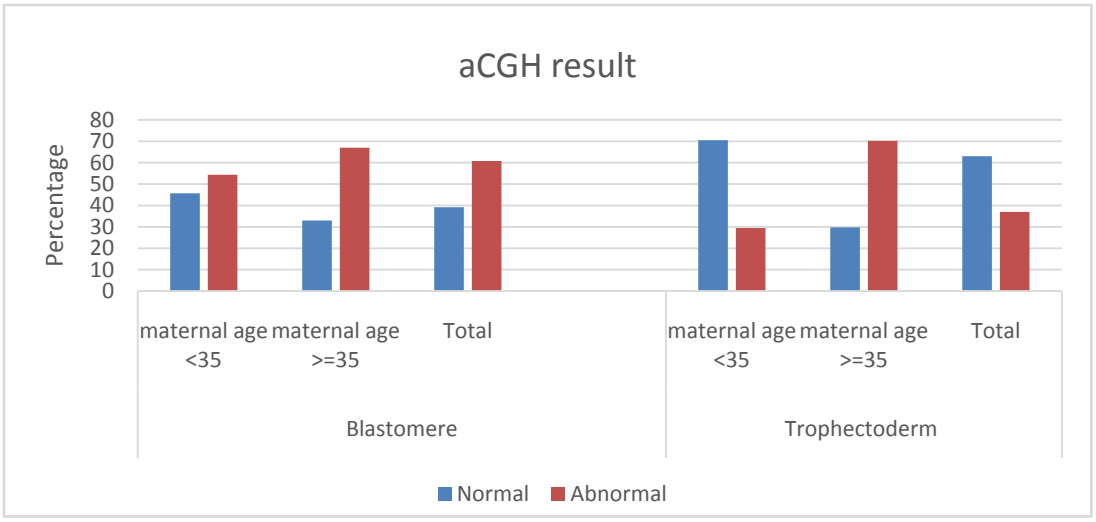

Figure 1 : Summary result from PGS with aCGH

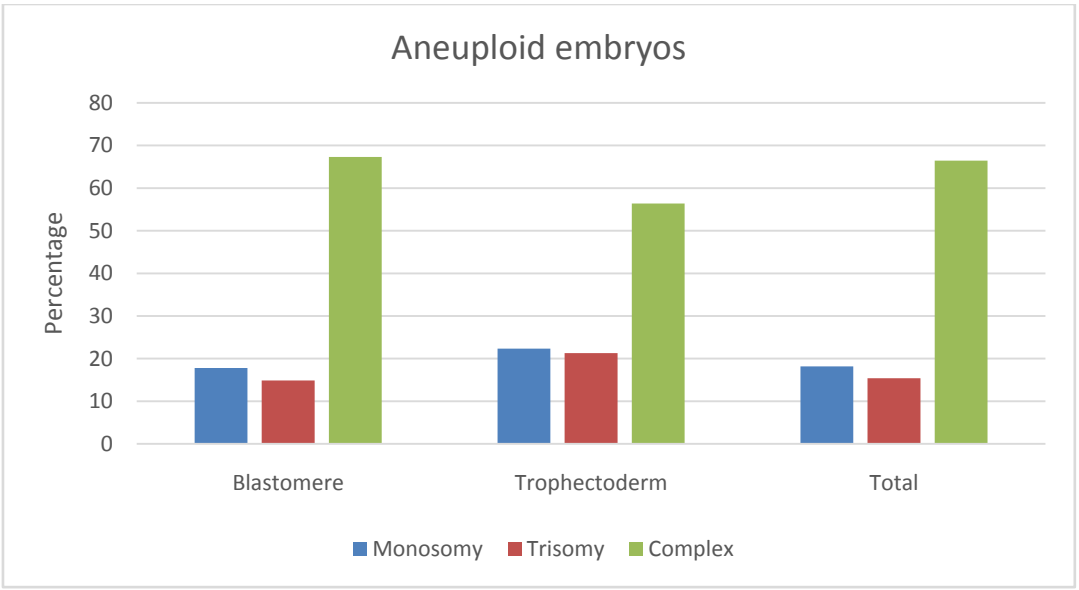

Figure 2 : Aneuploidy rate in blastomeres and trophectoderm

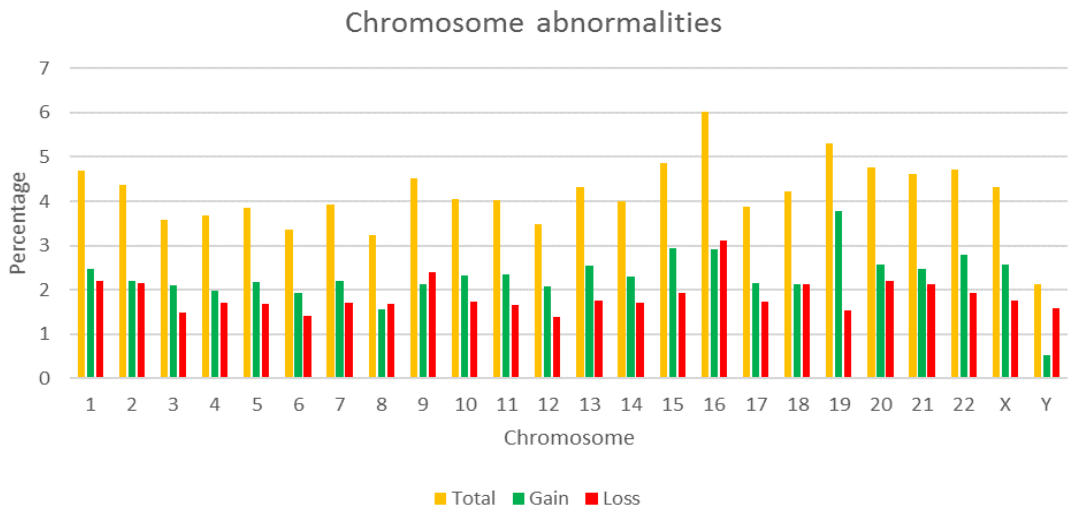

Figure 3 : The incidence of chromosome abnormalities in 24 chromosomes

IV. Discussion

A meta-analysis of PGS demonstrated improving clinical outcomes because comprehensive chromosome screening with advanced technologies was used. The high thoughput technology requires sufficient amount of DNA but the starting material from embryo biopsy has limited DNA quantity. Whole genome amplification technology solves this problem by amplifying DNA into microgram quantity yields, however the ability to amplify sufficient good quality DNA from a few cells depends highly on following the guideline protocol (43). Amplification failure causing the amplified DNA not sufficient for use in high throughput method may occur due to factors such as human error when loading cells into the microtubes or quality of cells being biopsied from the embryos.

The present study reports the primary outcome in chromosome abnormality of embryos and shows that the euploidy rate of blastocyst was high (62.99%), and correlates with other studies in which the euploidy rate ranged from 42% to 83% (22–24). We found that patients with AMA had high aneuploidy rates in both the blastomeres and trophectoderm because maternal age affects chromosome segregation during the development of oocyte, as shown in previous studies (45–48).

Moreover, we found that the aneuploidy rate of blastomeres was 60.79%, in concordance with previous studies showing aneuploidy rates of 38% to 64% (39,40,49). In addition, the aneuploidy rate of blastocysts was 37.01% in concordance with ability of other techniques such as SNP microarray to detect aneuploidy rates of 15% to 52% (22–24). This study demonstrated a high incidence of chromosome aneuploidy in chromosomes 15, 16, 19, and 22, as did Dekel-Naftali et al. and Alfarawati et al. (50,51) but chromosome 20 was excluded.

The blastocysts had lower aneuploidy rates than blastomeres due to self-correction and mosaicism. The self-correction phenomenon is a process in the differentiating embryo for eliminating mosaicism by bringing about death and/or a decrease in abnormal cells (52). Barbash-Hazan et al. demonstrated that in 32.6% of aneuploid blastomeres self-correction could occur during preimplantation development to the blastocyst stage which had the highest self-correction rate (38.1%) compared with later stages (13) and had a low incidence of mosaicism as well.

The limitation of aCGH is that it detects copy number changes rather than polyploidy and haploid embryos. Gutierrez-Mateo reported 7.5% (6,898/92,018) of embryos were polyploid or haploid by FISH analysis. Most of these embryos had other abnormalities detectable by aCGH. Only 1.7% of embryos were polyploid or haploid undetectable by aCGH. Approximately 0.2% of embryos had homogeneous polyploidy or haploidy with good morphology demonstrated. Therefore, we estimated that the misdiagnosis rate due to non-detection of polyploidy is below 0.2 % (40).

This study is the first report of aneuploidy screening using aCGH in Thai patients. We investigated the primary outcome in a large sample size to study the incidence of chromosome abnormalities in embryos and found that the percentage of chromosomal abnormalities equal to the other studies. The limitation of this retrospective study is that we could not report the final outcome or livebirth rate.

V. Acknowledgements

There is no conflict of interest

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Happy Hysterectomy? Quality of Life after in Rural Women of Central India

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Introduction- Hysterectomy Is One Of The Most Common Gynaecological Operation Performed Globally With An Incidence Of Approximately 30% In Women >60 Yrs. Of Age.

Studies Have Shown That Most Women Received Hysterectomy Due To Disabling Symptoms Such As Menstrual Pain, Menorrhagia, Unexplained Uterine Bleeding And Chronic Pelvic Pain Related With Non-Malignant Pathologies Like Simple Endometrial Hyperplasia, Fibroid, Prolapse. There Are So Many Management Modalities To Cure These Symptoms, As These Have An Adverse Effect On A Woman's Quality Of Life. Most Women Reported A Reduction In Physical Symptoms And Pain And An Increase In Health Perceptions After Hysterectomy.[2] But In Rural Set Up Hysterectomy Is Still A Treatment Of Choice Even For All These Benign Pathologies.In This Study We Tried To Assess Qol After Hysterectomy For These Conditions.

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Happy Hysterectomy? Quality of Life after in Rural Women of Central India

Dr. Deepti Shrivasatva [α] & Dr. Priyakshi Chaudhry [σ]

I. Introduction

Hysterectomy Is One Of The Most Common Gynaecological Operation Performed Globally With An Incidence Of Approximately 30% In Women >60 Yrs. Of Age.[1]

Studies Have Shown That Most Women Received Hysterectomy Due To Disabling Symptoms Such As Menstrual Pain, Menorrhagia, Unexplained Uterine Bleeding And Chronic Pelvic Pain Related With Non-Malignant Pathologies Like Simple Endometrial Hyperplasia, Fibroid, Prolapse. There Are So Many Management Modalities To Cure These Symptoms, As These Have An Adverse Effect On A Woman's Quality Of Life. Most Women Reported A Reduction In Physical Symptoms And Pain And An Increase In Health Perceptions After Hysterectomy.[2] But In Rural Set Up Hysterectomy Is Still A Treatment Of Choice Even For All These Benign Pathologies.In This Study We Tried To Assess Qol After Hysterectomy For These Conditions.

II. Aims and Objectives

1) Evaluation Of Quality Of Life As A Short Term Outcome Measure Upto 3 Months After Hysterectomy.
2) To Analyze And Compare The Changes In Health Related Qol Before And After Hysterectomy For Benign Diseases In Rural Women.

III. Methodology

After Institutional Ethical Committee Approval A Prospective Observational Analytical Study Was Done Which Included 300 Patients From September 2011 To August 2013.They Were Analysed For Indications At Acharya Vinobha Bhave Rural Hospital, Sawangi (M), Wardha, Characteristics, Treatment And Clinical Short Term Outcome Measures. Prestructured Proforma Based On Euro-5d-5l Vas Was Used As Study Tool Euro -5d-5l Included 5 Health State- Anxiety/Depression, Pain/Discomfort, Mobility, Self Care, Usual Activities. Vas Scale-This Is To Know How Good Or Bad Health Is Today. This Scale Is Numbered From 0 To 100.100 Means The Best Health And 0 Means The Worst Health One Can Imagine.

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a) Inclusion Criteria

1. Hysterectomy Done For Benign Indication Of Pelvic Pathology
2. Any Route Of Hysterectomy I.E. Abdominal, Vaginal Or Laparoscopic
3. Any Type Of Hysterectomy I.E. Total, Subtotal Or Pan Hysterectomy.

b) Exclusion Criteria

1. Malignant Condition As An Indication Of Hysterectomy.
2. Any Major Intraoperative Or Postoperative Surgical Complication

IV. Results

Demographic Profile

Age	No of Cases (N=300)
>35-45 Years	82(27.5%)
45-55 Years	110(36.5%)
55 And Above Years	108(36%)
Education	
Primary	141(47%)
Secondary	69(23%)
Others	90(30%)
Occupation	
House Maker	141(47%)
Farmer	102(34%)
Proffession	57(19%)

Table N0 2 : Indications

Indications	No of Cases N=300
Fibroid	60(20%)
Dub	120(40%)
Prolapse	45(15%)
Others	75(25%)

Table No 3 : Mode of Hysterectomy-

Mode of Hysterectomy	No of Cases
Abdominal	183(61%)
Vaginal	114(38%)
Laproscopy	3(1%)

Table No 4 : Patient Having Extreme Problem

	Pre Op (N=300)	Day 7(N=300)	Day 14 (N=258)	6 Weeks (N=220)	3 Months (N=183)
Mobility	30(10%)	60(20%)	30(11.7%)	15(6.6%)	0(0%)
Self Care	30(10%)	60(20%)	46(17.6%)	22(10%)	9(4%)
Usual Activity	30(10%)	105(35%)	46(17.6%)	22(10%)	15(8.1%)
Pain And Discomfort	120(40%)	135(45%)	23(8.8%)	10(4.6%)	3(1.6%)
Anxiety And Depression	120(40%)	60(20%)	14(5.8%)	12(5.3%)	9(4%)

Table No 5 : Visual Analogue Scale

Vas	Pre Op(N=300)	Day 7(N=300)	Day 14 (N=258)	6 Weeks (N=220)	3 Months (N=183)
0-20	120(40%)	45(15%)	30(11.7%)	22(10%)	4(2.4%)
20-40	30(10%)	75(25%)	61(23.5%)	15(6.6%)	15(8.1%)
40-60	45(15%)	90(30%)	61(23.5%)	22(10%)	15(8.1%)
60-80	60(20%)	60(20%)	61(23.5%)	88(40%)	44(24.3%)
80-100	45(15%)	30(10%)	45(17.6%)	73(33.3%)	104(57.1%)

V. Disscussion

This Study Showed That Maximum Patients Out Of 300 Patients Belonged To The Age Group Of 45-55 Years And Were Homemakers And Had Received Only Primary Education 120 Patients Were Reported With Dub ,Pain And Discomfort Was The Common Complaint Due To Which There Day To Day Activity Was Hampered At Day 7 Of The Treatment 255 Had No Problem There Was No Pain And Discomfort ,Post-Surgery, On Day 14 We Lost 42 Patients In Follow Up And 42% Patients Got Relived From Pain And Discomfort, Past Surgery In 6 Th Week We Again Lost 38 Patients So Total No Patients Left Were 220 Out Of Which 128 Patients Got Relieved Of Pain And Discomfort, After 3 Months Of Surgery We Lost 37 More Patients And Total Left Were 183 Out Of Which 137 Got Completely Relived From Any Discomfort And Were Able To Do Their Day To Day Activity So Overall Self-Rated Health Status And Hrqol Significantly Improved At 6 Weeks And Then Remained Constant Throughout 3 Months And Onwards After Hysterectomy.

Within 6 Weeks After Hysterectomy, Patients Had Returned To Normal Health And Bodily Functions. Symptom Relief After Hysterectomy Is Associated With A Marked Improvement In Hrqol.

Y.L Yang Et Al Had Done A Prospective Follow-Up Study Which Recruited 38 Women (Age Range, 33–52 Years) Who Underwent Abdominal Hysterectomy For Non-Malignant Causes In University Of Taiwan The Result Showed That Patients' Attitudes Toward Hysterectomy And Subsequent Sexual Activity Were Influenced By The Surgery. All Patients Showed Significant Improvements In The Physical Component Summary (Pcs) Of Sf-36 (Mean, 42.1–51.0), But There Was No Significant Difference In The Mental Component Summary (Mcs). The Significant Improvements Were Found From The Five Repeated Measurements Of The Self-Rated Health Status (Mean, 6.0–7.3). Haemoglobin Level Was The Most Important Predictor Of Hrqol Before Surgery. Women In Employment, With More Years Of Education And Previous Blood Transfusion Had High Mcs Scores After Surgery. Conclusion: The Overall Self-Rated Health Status And Pcs Showed Significant Improvements After Hysterectomy. Having Had A Blood Transfusion, Being Educated And Employed Were Positively Associated With Mcs Score After Surgery. These Findings Are Vital For Preoperative Counselling For Women Undergoing Hysterectomy.[2]

Taipale K Et Al Conducted A Prospective Observational Study At University Referral Hospital In Helsinki.A Total Of 337 Women Entering For Routine Hysterectomy Due To A Benign Disease (210 Benign Uterine Or Ovarian Cause, 20 Endometriosis, 51 Uterovaginal Prolapse, 56 Menorrhagia) Were Taken And The Result Came Out Were Mean [Standard Deviation (Sd)] Hrqol Score (On A 0-1 Scale) In The Whole Group Improved From The Preoperative Of 0.905 (0.073) To 0.925 (0.077) Six Months After The Operation ($P < 0.001$). The Largest Mean (Sd) Improvement Was Seen In Patients With Endometriosis [0.048 (0.067)] Followed By Those With Menorrhagia [0.024 (0.054)], Benign Uterine Or Ovarian Cause [0.018 (0.071)], And Prolapse [0.017 (0.055)]. In The Whole Group, The Intervention Produced A Mean (Sd) Of 0.222 (1.270) Qalys At Mean (Sd) Direct Hospital Cost Of Euro3, 138 (2,098). Consequently, The Cost Per Qaly Gained In The Whole Group Was Euro14,135 Varying From Euro3,720 To 31,570 In The Disease Groups.And Concluded That The Cost Per Quality Gained For Hysterectomy For Benign Uterine Disorders Is Strongly Dependent on The Indication For Surgery.[3]

Hartmann Conducted Cohort Study of 1249 Patients, Participants Were Interviewed, Before Surgery And At 5 Intervals After, Regarding Pelvic Pain, Depression, Quality of Life, And Sexual Function. We Compared Quality Of Life And Sexual Function At 6 And 24 Months Among Women With Preoperative Pelvic Pain Alone, Depression Alone, Both Pelvic Pain And

Depression, Or Neither.At 24 Months, Women With Pain And Depression Had Reduced Prevalence Of Pelvic Pain (96.7% Decreased To 19.4%), Limited Physical Function (66.1% To 34.3%), Impaired Mental Health (93.3% To 38.1%), And Limited Social Function (41.1% To 15.1%). Women With Pain Only Improved In Pelvic Pain (95.1% To 9.3%) And Limited Activity Level (74.3% To 24.2%). The Group With Depression Only Had Improvement In Impaired Mental Health (85.1% To 33.1%). Dyspareunia Decreased In All Groups. Compared With Women Who Had Neither Pain Nor Depression, Women With Depression And Pain Had 3 To 5 Times The Odds Of Continued Impaired Quality Of Life: Odds Ratio (Or) 2.73, 95% Confidence Interval (Ci) 1.78-4.19 For Limited Physical Function; Or 3.41, 95% Ci 2.13-5.46 For Impaired Mental Health; Or 5.76, 95% Ci 2.79-11.87 For Limited Social Function; Or 4.91, 95% Ci 2.63-9.16 For Continued Pelvic Pain; And Or 2.41, 95% Ci 1.26-4.62 For Dyspareunia. And Concluded That Women With Pelvic Pain And Depression Fare Less Well 24 Months After Hysterectomy Than Women Who Have Either Disorder Alone Or Neither. Nevertheless, These Women Improve Substantially Over Their Preoperative Baseline In All The Quality Of Life And Sexual Function Areas Assessed.[4]

Quality Of Life Was Measured In 348 Women Attending Gynaecological Outpatients Using Euroqol 5d. . Quality Of Life Was Then Measured In 131 Women Before And After Hysterectomy. Of The Outpatient Group 50% Of The Women Reported Problems With Pain And 40% With Depression. Women Undergoing Hysterectomy Reported Similar Preoperative Levels Of Pain And Depression. However, 6 Months Postoperatively There Were Significantly Fewer Women Complaining Of Both Pain And Depression. Mean Calculated Scores Of Self-Rated Quality Of Life Improved Significantly From 0.72 Preoperatively To 0.89 Postoperatively ($P < 0.0001$). In Conclusion, Quality Of Life Can Be Simply Quantified Using The Euroqol Instrument And Is Suitable For Gynaecological Patients. Hysterectomy For The Treatment Of Benign Conditions Improves The Overall Quality Of Life For The Majority Of Women.[5]

VI. Conclusion

More And More Conservative Management For Benign Diseases Of Uterus Is Advocated And Recommended Globally, But In Rural Setup Still Hysterectomy Plays A Large Role Due To Benefit Of Cost, Feasibility, Permanent Solution And Less Need Of Follow Up Along With Excellent Satisfaction That Reoccurrence Is Least And It Is A Permanent Method In Women As Follow Up Is Difficult.

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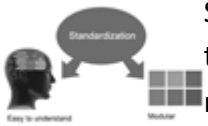

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3. Submission of Manuscripts,

4. Manuscript's Category,

5. Structure and Format of Manuscript,

6. After Acceptance.

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22. Never start in last minute: Always start at right time and give enough time to research work. Leaving everything to the last minute will degrade your paper and spoil your work.

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

24. Never copy others' work: Never copy others' work and give it your name because if evaluator has seen it anywhere you will be in trouble.

25. Take proper rest and food: No matter how many hours you spend for your research activity, if you are not taking care of your health then all your efforts will be in vain. For a quality research, study is must, and this can be done by taking proper rest and food.

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

27. Refresh your mind after intervals: Try to give rest to your mind by listening to soft music or by sleeping in intervals. This will also improve your memory.

28. Make colleagues: Always try to make colleagues. No matter how sharper or intelligent you are, if you make colleagues you can have several ideas, which will be helpful for your research.

29. Think technically: Always think technically. If anything happens, then search its reasons, its benefits, and demerits.

30. Think and then print: When you will go to print your paper, notice that tables are not be split, headings are not detached from their descriptions, and page sequence is maintained.

31. Adding unnecessary information: Do not add unnecessary information, like, I have used MS Excel to draw graph. Do not add irrelevant and inappropriate material. These all will create superfluous. Foreign terminology and phrases are not apropos. One should NEVER take a broad view. Analogy in script is like feathers on a snake. Not at all use a large word when a very small one would be sufficient. Use words properly, regardless of how others use them. Remove quotations. Puns are for kids, not grunt readers. Amplification is a billion times of inferior quality than sarcasm.

32. Never oversimplify everything: To add material in your research paper, never go for oversimplification. This will definitely irritate the evaluator. Be more or less specific. Also too, by no means, ever use rhythmic redundancies. Contractions aren't essential and shouldn't be there used. Comparisons are as terrible as clichés. Give up ampersands and abbreviations, and so on. Remove commas, that are, not necessary. Parenthetical words however should be together with this in commas. Understatement is all the time the complete best way to put onward earth-shaking thoughts. Give a detailed literary review.

33. Report concluded results: Use concluded results. From raw data, filter the results and then conclude your studies based on measurements and observations taken. Significant figures and appropriate number of decimal places should be used. Parenthetical remarks are prohibitive. Proofread carefully at final stage. In the end give outline to your arguments. Spot out perspectives of further study of this subject. Justify your conclusion by at the bottom of them with sufficient justifications and examples.

34. After 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 to 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 in 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 criterion for grading the final paper by peer-reviewers.

Final Points:

A purpose of organizing a research paper is to let people to interpret your effort selectively. The journal requires the following sections, submitted in the order listed, each section to start on a new page.

The introduction will be compiled from reference matter and will reflect the design processes or outline of basis that direct you to make study. As you will carry out the process of study, the method and process section will be constructed as like that. The result segment will show related statistics in nearly sequential order and will direct the reviewers next to the similar intellectual paths throughout the data that you took to carry out your study. The discussion section will provide understanding of the data and projections as to the implication of the results. The use of good quality references all through the paper will give the effort trustworthiness by representing an alertness of 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 the 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 evade

- Insertion a title at the foot of a page with the subsequent text on the next page
- Separating a table/chart or figure - impound each figure/table to a single page
- Submitting a manuscript with pages out of sequence

In every sections of your document

· Use standard writing style including articles ("a", "the," etc.)

· Keep on paying attention on the research topic of the paper

· Use paragraphs to split each significant point (excluding for the abstract)

· Align the primary line of each section

· Present your points in sound order

· Use present tense to report well accepted

· Use past tense to describe specific results

· Shun familiar wording, don't address the reviewer directly, and don't use slang, slang language, or superlatives

· Shun use of extra pictures - include only those figures essential to presenting results

Title Page:

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

Abstract:

The summary should be two hundred words or less. It should briefly and clearly explain the key findings reported in the manuscript--must have precise statistics. It should not have abnormal acronyms or abbreviations. It should be logical in itself. Shun citing 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 approach 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. Yet, use comprehensive sentences and do not let go readability for briefness. You can maintain it succinct by phrasing sentences so that they provide more than 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 maintain the initial two items to no more than one ruling each.

- Reason of the study - 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 quantitative data; results of any numerical analysis should be reported
- Significant conclusions or questions that track from the research(es)

Approach:

- Single section, and succinct
- As a outline of job done, it is always written in past tense
- A conceptual should situate on its own, and not submit to any other part of the paper such as a form or table
- Center on shortening results - bound background information to a verdict or two, if completely necessary
- What you account in an conceptual must be regular with what you reported in the manuscript
- Exact spelling, clearness 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 to comprehend and calculate the purpose of your study without having to submit to other works. The basis for the study should be offered. Give most important references but shun difficult to make a comprehensive appraisal of the topic. In the introduction, describe the problem visibly. If the problem is not acknowledged in a logical, reasonable way, the reviewer will have no attention in your result. Speak in common terms about techniques used to explain the problem, if needed, but do not present any particulars about the protocols here. Following approach can create a valuable beginning:

- Explain the value (significance) of the study
- Shield the model - why did you employ this particular system or method? What is its compensation? You strength remark on its appropriateness from a abstract point of vision as well as point out sensible reasons for using it.
- Present a justification. Status your particular theory (es) or aim(s), and describe the logic that led you to choose them.
- Very for a short time explain the tentative propose and how it skilled 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 with every section. If you make the four points listed above, you will need a least of four paragraphs.

- Present surroundings information only as desirable in order hold up a situation. The reviewer does not desire to read the whole thing you know about a topic.
- Shape the theory/purpose 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 sound written Procedures segment allows a capable scientist to replacement 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 for the least amount of information that would permit another capable scientist to spare 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 object, mention the specific item describing a way but draw the basic principle while stating the situation. The purpose is to text 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:

- Explain materials individually only if the study is so complex that it saves liberty this way.
- Embrace particular materials, and any tools or provisions that are not frequently found in laboratories.
- Do not take in frequently found.
- If use of a definite type of tools.
- Materials may be reported in a part section or else they may be recognized along with your measures.

Methods:

- Report the method (not 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 - details how procedures were completed not how they were exclusively performed on a particular day.
- If well known procedures were used, account the procedure by name, possibly with reference, and that's all.

Approach:

- It is embarrassed or not possible to use vigorous voice when documenting methods with no using first person, which would focus the reviewer's interest on the researcher rather than the job. As a result when script up the methods most authors use third person passive voice.
- Use standard style in this and in 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 a 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. Carry on to be to the point, by means of statistics and tables, if suitable, to present consequences most efficiently.You must obviously differentiate material that would usually be incorporated in a study editorial from any unprocessed data or additional appendix matter that would not be available. In fact, such matter should not be submitted at all except requested by the instructor.

Content

- Sum up your conclusion in text and demonstrate them, if suitable, with figures and tables.
- In manuscript, explain each of your consequences, point the reader to remarks that are most appropriate.
- Present a background, such as by describing the question that was addressed by creation an exacting study.
- Explain results of control experiments and comprise 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 in manuscript form.

What to stay away from

- Do not discuss or infer your outcome, report surroundings information, or try to explain anything.
- Not at all, take in raw data or intermediate calculations in a research manuscript.
- Do not present the similar data more than once.
- Manuscript should complement any figures or tables, not duplicate the identical information.
- Never confuse figures with tables - there is a difference.

Approach

- As forever, use past tense when you submit to 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 part.

Figures and tables

- If you put figures and tables at the end of the details, make certain that they are visibly distinguished from any attach appendix materials, such as raw facts
- Despite of position, each figure must be numbered one after the other and complete with subtitle
- In spite of position, each table must be titled, numbered one after the other and complete with heading
- All figure and table must be adequately complete that it could situate on its own, divide from text

Discussion:

The Discussion is expected the trickiest segment to write and describe. A lot of papers submitted for journal are discarded based on problems with the Discussion. There is no head of state for how long a 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 implication of the study. The purpose here is to offer an understanding of your results and hold up for all of your conclusions, using facts from your research and generally accepted information, if suitable. The implication of result should be visibly 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 with prospect, and let it drop at that.

- Make a decision if each premise is supported, 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 the experiment might be personalized to accomplish a new idea.
- Give details all of your remarks as much as possible, focus on mechanisms.
- Make a decision if the tentative design sufficiently addressed the theory, and whether or not it was correctly restricted.
- Try to present substitute explanations if sensible alternatives be present.
- One 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 available information
- Submit to work done by specific persons (including you) in past tense.
- Submit to generally acknowledged facts and main beliefs in present tense.

Please carefully note down following rules and regulation before submitting your Research Paper to Global Journals Inc. (US):

Segment Draft and Final Research Paper: You have to strictly follow the template of research paper. If it is not done your paper may get rejected.

- The **major constraint** is that you must independently make all content, tables, graphs, and facts that are offered in the paper. You must write each part of the paper wholly on your own. The Peer-reviewers need to identify your own perceptive of the concepts in your own terms. NEVER extract straight from any foundation, and never rephrase someone else's analysis.

- Do not give permission to anyone else to "PROOFREAD" your manuscript.

- Methods to avoid Plagiarism is applied by us on every paper, if found guilty, you will be blacklisted by all of our collaborated research groups, your institution will be informed for this and strict legal actions will be taken immediately.)
- To guard yourself and others from possible illegal use please do not permit anyone right to use to your paper and files.

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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

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