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## Surgical Management of Coexisting Trigeminal Neuralgia, Hemifacial Spasm, and Glossopharyngeal Neuralgia by Microasterional Approach

By Armando Morales, MD, Shery Lane Sanchez, MD & Richard Gonzalo Párraga, MD

### Abstract-

*Background:* Compression of multiples cranial nerves at the entry zone in the brainstem is called hy peractive dysfunction syndrome. Caused by the dolichoectasia basilar artery that compress V, VII-VIII and IX cranial nerves, in our patient it caused trigeminal neuralgia, hemifacial spasm and glossopharyngeal neuralgia, that its a very rare condition, probably less than 1% of rhizopathies published. There are at less 9 cases reported in the reviewed literature. This case would be the 10th reported case. This is the first case treated with an Microasterional approach with a backup video.

*Case Description:* In these casewe are reporting a patient diagnosed with trigeminal neuralgia, hemifacial spasm and glos sopharyngeal neuralgia, caused by the dolichoectasia basilar artery, caused by microvascular compression. In which case an Microasterional approach was performed. A microsurgical dissection was performed, separating the artery from the nerves, and interposing a non-absorbable sponge between the nerves and vessels.

Keywords: decompression surgery, hemifacial spasm, glossopharyngeal neuralgia, microasterional approach, trigeminal neuralgia.

GJMR-A Classification: DDC Code: 658.4036 LCC Code: HD66, DDC Code: 616.9 LCC Code: RC111

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Surgical Management of Hyperactive Dysfunction Syndrome by Microasterional Approach

Armando Morales, MD a, Shery Lane Sanchez, MD a & Richard Gonzalo Párraga, MD P

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*Conclusion:* The microasterional approach and microvascular decompression with a non-absorbable sponge is useful to treathyperactive dysfunction syndromes, with good results, with a resolution of the symptoms in the immediate postoperative period.

Keywords: decompression surgery, hemifacial spasm, glossopharyngeal neuralgia, microasterional approach, trigeminal neuralgia.



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### ANNOTATION

- 1) 00:00:00 Title
- 2) 00:08:00 Patient History
- 3) 00:25:14 Preoperative studies
- 4) 00:40:15 Park bench position
- 5) 00:45:15 Park bench position (medical illustration)
- 6) 00:51:05 Microasterional approach (medical illustration)
- 7) 00:56:24 Asterional Zone (medical illustration)
- 8) 01:02:03 Microasterional approach
- 9) 01:06:19 Microasterional approach and dural opening
- 10) 01:11:28 Microdissection of the neurovascular structures
- 11) 01:15:13 Microdissection of the neurovascular structures (medical illustration)
- 12) 01:27:17 Microdissection of the VII-VIII nerves
- 13) 01:38:06 Basilar dolichoectasia artery compressing the VII-VIII nerves (medical illustration)
- 14) 01:55:09 Microdissection to expose the V nerve
- 15) 02:26:00 Basilar dolichoectasia artery compressing the V nerve
- 16) 02:38:24 Placement of non-absorbable sponge in the neurovascular compression
- 17) 03:24:25 Placement of non-absorbable sponge in the neurovascular compression (medical illustration)
- 18) 03:31:21 Placement of non-absorbable sponge in the neurovascular compression at the VII-VIII nerves complex
- 19) 04:39:25 Microdissection to expose the IX-X-XI nerves complex
- 20) 04:53:02 Placement of non-absorbable sponge in the neurovascular compression at the IX-X-XI nerves complex
- 21) 05:30:03 Neurovascular compression solved by microvascular decompression technique (medical illustration)

- 22) 05:38:25 Postoperative
- 23) 05:46:28 References

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Declaration of patient consent

The authors certify that they have obtained all appropriate patient consent.

Author Contributions

*Primary surgeon:* Richard Gonzalo Párraga. Assistant surgeon: Armando Morales, Shery Lane Sanchez. Medical illustration: Shery Lane Sanchez.

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Conflicts of interest

There are no conflicts of interest.