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Image Report

Hemifacial spasm due to multiple neurovascular conflicts: A conundrum

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Received : 30 March 2020
Accepted : 12 June 2020
Published : 11 July 2020

DOI
10.25259/SNI_140_2020

Quick Response Code:

Keywords: Anterior inferior cerebellar artery, Basilar artery, Dolichoectasia, Hemifacial spasm, Neurovascular conflict

We report the case of a 54-year-old male who presented with complaints of twitching of the right side of the face for 18 months, which had increased in severity for the past 3 months. On examination, there was no neurological deficit. His radiology revealed dolichoectasia of the right vertebrobasilar artery causing compression of the right 7th–8th nerve complex [Figure 1]. At surgery, multiple sites of neurovascular conflict were present [Figure 2]. We observed neurovascular conflict between the dolichoectatic basilar artery, anterior inferior cerebellar artery (AICA), and the 7th and 8th nerve complex [Figure 2]. A branch of AICA was seen splitting and traversing through the 7th–8th nerve complex [Figure 2]. We kept a Teflon patch between the dolichoectatic basilar artery on one side and AICA with the 7th–8th nerve complex at the root exit zone (REZ) on the other side [Figure 2]. Another Teflon patch was kept between AICA and the 7th–8th nerve complex [Figure 2]. We decided not to sacrifice the branch of AICA which was traversing through the 7th–8th nerve complex [Figure 2]. Postsurgery, there was complete resolution of the hemifacial spasm. This rare case underscores the importance of preserving the branch of AICA traversing through the 7th–8th nerve complex without compromising the postoperative result.

Hemifacial spasm is usually caused by compression of the facial nerve at the REZ by a vessel, most commonly AICA.[4] Microvascular decompression of the facial nerve is the surgical procedure of choice in these patients. Postsurgery, complete resolution of spasm occurs in approximately 85%, the spasm is diminished in 9% and unchanged in 6%.[1-3]

Declaration of patient consent

Patient's consent not obtained as patient's identity is not disclosed or compromised.

Financial support and sponsorship

Nil.

Figure 1: Magnetic resonance imaging of the brain reveals dolichoectasia of the right vertebrobasilar artery causing compression of the right 7th–8th nerve complex.

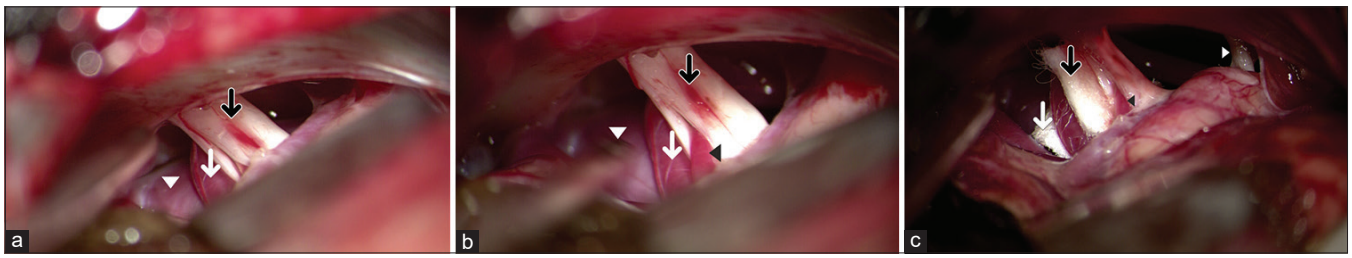

Figure 2: Intraoperative photographs showing (a) neurovascular conflict between the dolichoectatic basilar artery (white arrowhead), anterior inferior cerebellar artery (AICA) (white arrow), and the 7th–8th nerve complex (black arrow). (b) A branch of AICA splitting and traversing through the 7th–8th nerve complex (black arrowhead) (dolichoectatic basilar artery – white arrowhead, AICA – white arrow, and 7th–8th nerve complex – black arrow). (c) A Teflon patch kept between the dolichoectatic basilar artery on one side and AICA with the 7th–8th nerve complex at the root exit zone on the other side (white arrow). Another Teflon patch was kept between AICA and the 7th–8th nerve complex (black arrow). The branch of AICA traversing through the 7th–8th nerve complex was preserved (black arrowhead). The lower cranial nerves are also seen (white arrowhead).

Conflicts of interest

There are no conflicts of interest.

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How to cite this article: Gandhoke CS, Sharma AK, Sharma RK, Syal SK. Hemifacial spasm due to multiple neurovascular conflicts: A conundrum. Surg Neurol Int 2020;11:180.