



Neurovascular compression syndromes - Hemi-pharyngeal spasm, a new entity?

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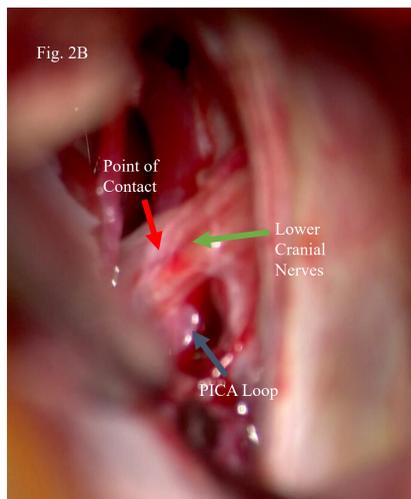
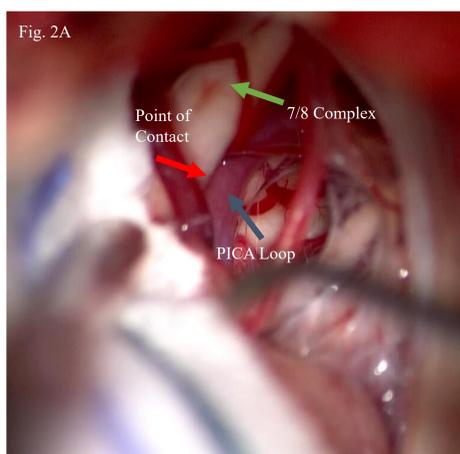
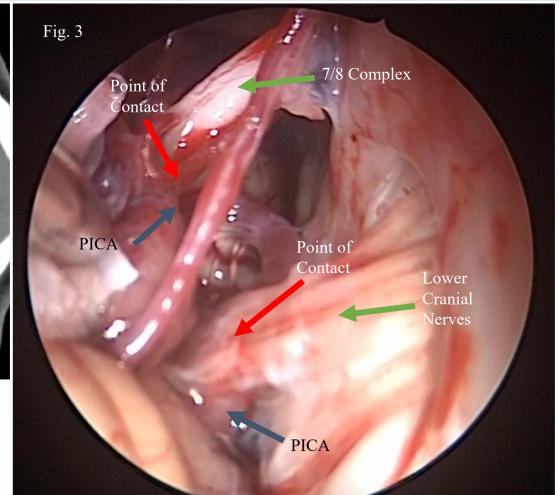
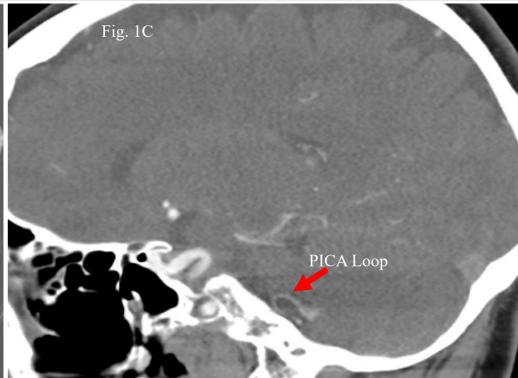
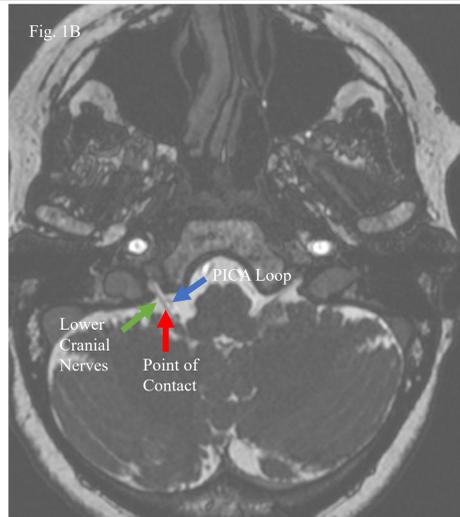
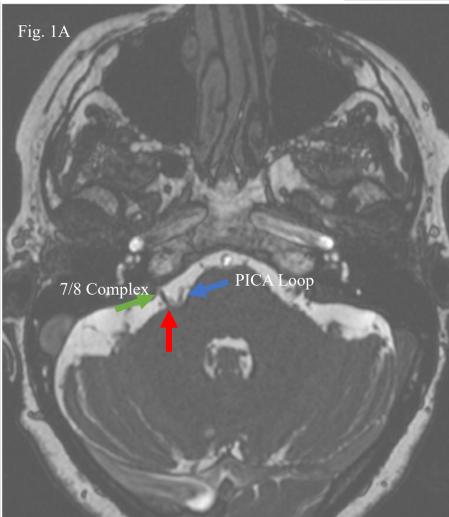
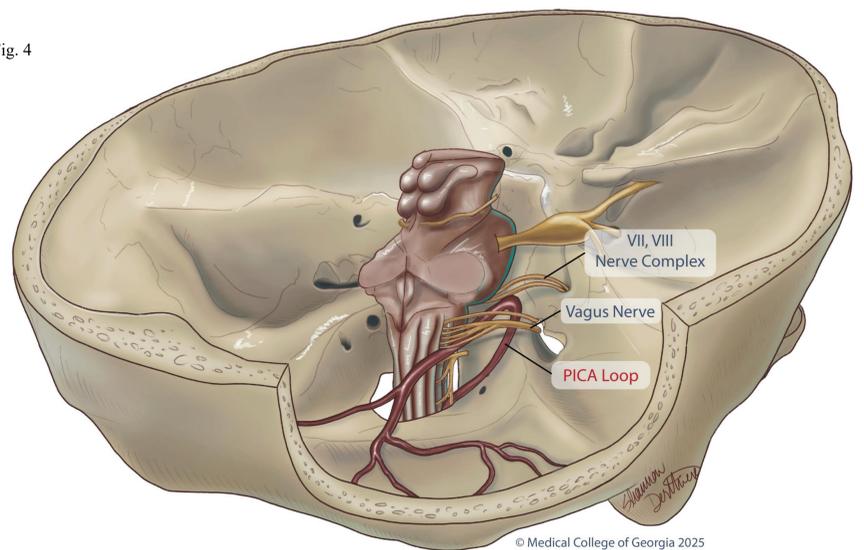


Fig. 4



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Introduction

Neurovascular compression of Vagus Nerve (VN) is rare. Common symptoms associated with VN compression include hiccups, cough, and symptoms of laryngeal contraction such as stridor. To our knowledge, isolated symptoms of swallowing induced hemi-pharyngeal spasm (HPS) have not yet been reported in relation to VN compression.

Methods and Materials

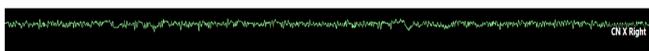
Here, we present a case report of a rare case of dual compression of Vagus and Facial nerves resulting in hemi-pharyngeal and hemi-facial spasm, respectively.

Fig. 5

Right Vagus Nerve - Pre-Decompression



Right Vagus Nerve - Post-Decompression



Results

A 65-year-old female was initially diagnosed with hemifacial spasm (HFS) 5 years ago. 2 years ago, she developed unilateral contractions in her neck/throat with swallowing. These were ipsilateral to her HFS. These symptoms progressively worsened. They were only triggered by swallowing and lasted a few minutes. There was no associated sharp pain, stridor or dysphonia. These symptoms were ignored by treating physicians, while the focus of treatment remained on HFS. After carefully reviewing her symptoms and detailed imaging, a loop of posterior inferior cerebellar artery (PICA) was identified compressing the lower cranial nerves (Fig. 1B) and the apex of the loop touching the exit zone of facial nerve (Fig. 1A&C). Vocal cord analysis did not demonstrate any abnormalities. A retrosigmoid approach was planned for microvascular decompression (MVD) for dual decompression of Vagus and Facial nerves. Intra-operative neuro-physiological monitoring prior to incision decompression increased electromyographic (EMG) activity in VN distribution. Once the VN was decompressed, the EMG normalized (Fig. 5). Immediately post-op, she had complete resolution of her symptoms of both HPS and HFS. She remains symptomatic.

Discussion

Vagus nerve compression syndromes are rare. Careful review of MRI and detailed history are critical in identifying these pathologies. Here, patient was found to have intra-op compression of VN (Fig. 2B) and the apex of PICA loop compressing 7th nerve (Fig. 2A). An endoscopic view is shown in Fig. 3. Figure 5 shows immediate improvement of baseline VN activity after decompression. Improvement in her clinical symptoms post-op further confirmed these findings. It is critical though to rule out other pathologies contributing to dysphagia, hoarseness, and cough.

Conclusions

Hemi-pharyngeal spasm should be recognized as a neuro-vascular compression syndrome which responds to microvascular decompression. Careful attention to symptoms and imaging is critical.

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