Idiopathic intracranial hypertension case reports

Idiopathic intracranial hypertension, also known as pseudotumor cerebri, often presents with severe headache and associated vision loss. Venous outflow obstruction has been noted as a prominent etiologic factor in many cases, and previous anatomic studies have shown that the internal jugular vein at the skull base can be prone to compression by the neighboring bony structures.

Fritch et al. presented a case of a 13-yr-old male with multifactorial intracranial hypertension including compression of the IJ vein by the transverse process of C1. Computerized tomography angiographic imaging revealed bilateral stenosis of the IJ veins due to compression from the transverse processes of C1. Medical management and shunt were attempted without resolution of symptoms. Hemodynamically significant stenosis at the right IJ was confirmed with manometry and so the C1 transverse process was resected and a stent placed endovascularly with a resolution of pressure gradient and clinical symptoms.

Contribution of C1 compression to this patient's intracranial hypertension suggests that evaluation for IJ compression below the skull base may be needed to identify the underlying cause of intracranial hypertension in certain patients. Furthermore, surgical decompression of the IJ vein may be required as part of the treatment strategy. If venous stenting is being considered, this decompressive step must be taken before stenting is performed. Fritch et al. offer this case as evidence that decompression of the IJ vein by C1 lateral mass resection can be an effective and novel technique in the repertoire of neurosurgical management of intracranial hypertension [1].

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Fritch C, Voronovich Z, Carlson AP. C1 Transverse Process Resection for Management of Jugular Stenosis [published online ahead of print, 2020 Mar 17]. Oper Neurosurg (Hagerstown). 2020;opaa032. doi:10.1093/ons/opaa032

[2]
Scerrati A, Zamboni P, De Bonis P. Letter: C1 Transverse Process Resection for Management of Jugular Stenosis [published online ahead of print, 2020 Jul 6]. Oper Neurosurg (Hagerstown). 2020;opaa200. doi:10.1093/ons/opaa200

[3]
Brunozzi D, Alaraj A. Commentary: C1 Transverse Process Resection for Management of Jugular Stenosis [published online ahead of print, 2020 Apr 13]. Oper Neurosurg (Hagerstown). 2020;opaa071. doi:10.1093/ons/opaa071