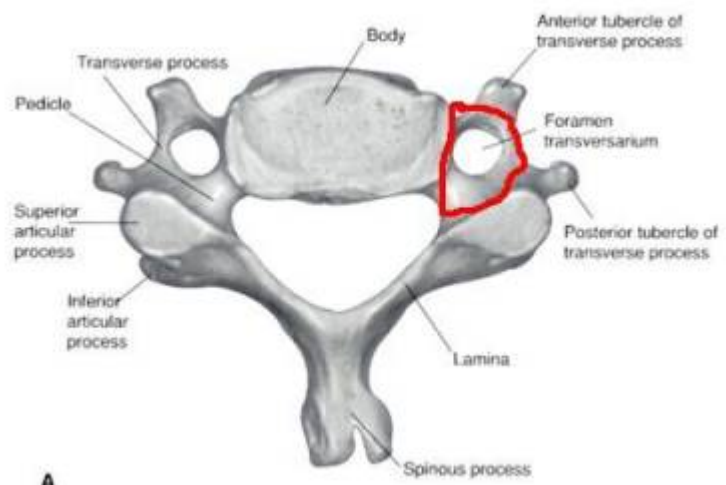


C1 cervical vertebra transverse process



The **transverse processes** are large; they project laterally and downward from the **lateral masses** and serve for the attachment of muscles which assist in rotating the head. They are long, and their anterior and posterior tubercles are fused into one mass; the foramen transversarium is directed from below, upward and backward.

Fritch et al. presented a case of a 13-yr-old male with multifactorial **intracranial hypertension** including compression of the **internal jugular 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) 2) 3)}.

References

1)

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