

# A Case of a High-Positioned and Giant Jugular Bulb Presenting with Pulsatile Tinnitus

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**Abstract :** A 51-year-old female presented with more than a 10-year history of left tinnitus. She had been referred to Kumamoto Central Hospital by an otolaryngologist for further evaluation. On admission her neurological status was otherwise normal. Her tinnitus has been pulsatile and persisted all day, however, it disappeared when compressing the left extracranial carotid artery. A CT scan, MR imaging and angiography revealed the jugular bulb to be giant-sized and high-positioned, however, no other vascular malformation was demonstrated. Although a high-positioned jugular bulb has been clinically seen at times in the neuroimaging findings, such patients have rarely presented with symptoms such a tinnitus. In this patient, the tinnitus might be associated with an increased venous flow, because it disappeared due to a flow reduction by carotid artery compression. Such a patient associated with pulsatile tinnitus has so far been rarely reported. We also review the pertinent literature of such patients and discuss the mechanism of tinnitus.

**Key words :** Pulsatile tinnitus, High positioned jugular bulb, Bone - image CT, Carotid ridge