

# Pulsatile Tinnitus — The Accumulation of the Degree and Number of Risk Factors Over Time

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## Abstract

**Objectives:** Pulsatile tinnitus (PT) is usually caused by vascular pulsation, its pathogenic mechanism is still unclear. We conducted a retrospective analysis of some patients diagnosed with PT, aiming to provide clinical reference for future studies on PT. **Design:** Retrospective study. **Setting:** Single institution. **Participants:** Surgical treatment of PT in 52 patients. **Methods:** We counted basic characteristics of all patients, analyzed the prognostic factors and the treatment results, classified the etiology according to the imaging findings. **Results:** The gender difference was statistically significant in PT(2=44.308, P;0.001). The analysis results found a correlation between duration of tinnitus and the prognosis of surgery (P<0.05). we found 19 conditions can lead to PT. We reported the first case in the world that the mirror man suffers from PT in our study. **Conclusions:** Our study suggests that we attribute the cause of PT to the superposition of the degree and number of risk factors over time. The duration of tinnitus is related to prognosis. The hearing loss of PT is mainly low frequency hearing loss. A total of 19 imaging conditions can cause PT were found. PT caused by sigmoid sinus diverticulum had the best surgical effect, while high jugular bulb had the worst. PT in mirror person is reported for the first time, which provides clinical reference for the diagnosis and treatment of PT in mirror person. At the same time, we raised some new questions for the study of PT.

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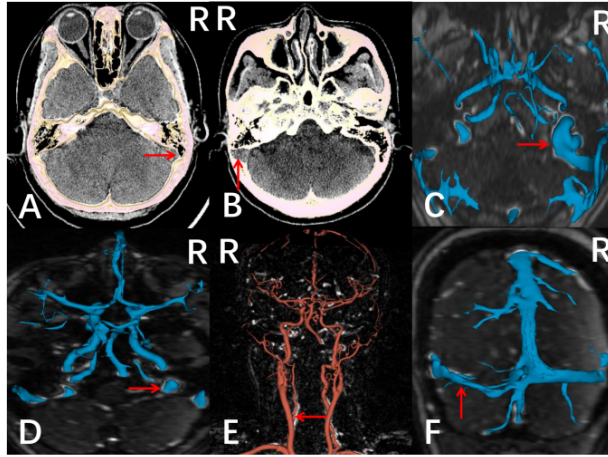
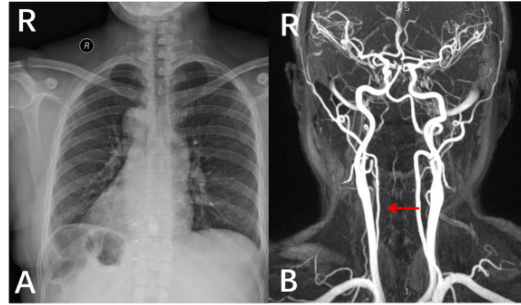


Fig. 1. We used 3D-Slicer software to reconstruct several typical CT or MRV images that can cause PT. A) DSSW; B)ASS; C)JBD; D)JHB; E)VAS; F)TSS.



**Fig. 2. Imaging findings of mirror man. (A)** Chest X-ray: The apex of the heart pointed to the right, the heart and the great vessels were specular inverted, and the stomach bubbles to the right. **(B)MRV:** Significant stenosis of the right vertebral artery.