

# Earlobe pulsation: a sign of tricuspid regurgitation

Kiyoshi Shikino, Masatomi Ikusaka

General Medicine, Chiba  
University Hospital, Chiba, Japan

**Correspondence to**  
Dr Kiyoshi Shikino,  
kshikino@gmail.com

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## DESCRIPTION

A 72-year-old woman had been experiencing shortness of breath for 2 weeks. Her jugular venous pressure was elevated, with prominent systolic pulsations and wagging earlobes (figure 1 and video 1). The prominent pulsations were eliminated with gentle pressure at the base of the neck. Auscultation revealed a loud pulmonary component of the second heart sound and a holosystolic murmur at the left lower sternal border that increased with inspiration. Transthoracic echocardiography confirmed severe tricuspid regurgitation and a dilated inferior vena cava without respiratory fluctuation. The estimated pulmonary artery systolic pressure was >50 mm Hg. Right-sided congestive heart failure was diagnosed and treated with oral diuretics. Within 1 week, the symptoms improved (figure 2 and video 2).



**Figure 1** Elevated jugular venous pressure with earlobe pulsation.



**Video 1** Elevated jugular venous pressure with earlobe pulsation.



**Video 2** Earlobe pulsation disappeared after treatment.

Jugular venous pulsations ascend with congestive heart failure and may reach the earlobes, causing them to pulsate.<sup>1</sup> In severe tricuspid regurgitation, one may see movements of the earlobes coincident with systole, as the C-V wave causes them to 'waggle' with each pulsation.<sup>1</sup> This C-V wave of severe tricuspid regurgitation resembles the large



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**Figure 2** Earlobe pulsation disappeared after treatment.

carotid-pulse wave of severe aortic regurgitation and is often confused with it.<sup>2</sup>

### Learning points

- ▶ Earlobe pulsation is indicative severe tricuspid regurgitation.
- ▶ The C-V wave of severe tricuspid regurgitation resembles the large carotid-pulse wave of severe aortic regurgitation.

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