



Pseudoaneurysm of the Superficial Temporal Artery After Blunt Trauma

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A woman in her mid-80s presented to the emergency department because of progressive increase in volume of a subcutaneous frontal hematoma (Figure 1). This hematoma had initially appeared 6 weeks earlier, following a fall resulting in direct facial trauma.

An ultrasound was performed and showed a 1.5-cm anechoic formation within the hematoma, in contact with a frontal branch of the superficial temporal artery (STA). This lesion was pulsatile, with blood flow circulating in it ("Yin-Yang" sign) and corresponded to a false aneurysm (Figure 2A–C). She was successfully treated by selective embolization of the supplying artery (Figure 2D).

False aneurysm (or pseudoaneurysm) occurs after localized rupture of the vascular wall. It consists of a pocket of blood communicating with the injured vessel, contained by the adjacent tissues.¹

The false aneurysm of the STA is rare, the main etiology being blunt trauma of the face.¹ The frontal branch of STA is most commonly affected because of its superficial path and proximity to the underlying bone structures.^{1–3}

The most common clinical manifestation is a nonpainful pulsatile mass, with headache or discomfort in the ear. False aneurysms usually occur 2 to 12 weeks after the initial injury.³

Doppler ultrasound is the first-line examination to confirm the diagnosis. Computed tomography and magnetic resonance imaging can also be useful. Angiography is an invasive examination and should be performed for therapeutic purposes.^{1,2}

Surgical resection of the pseudoaneurysm of the STA is the treatment of first choice. Embolization can also be made available. Conservative therapies (compression) are not recommended.²



FIGURE 1. Right frontal subcutaneous hematoma.

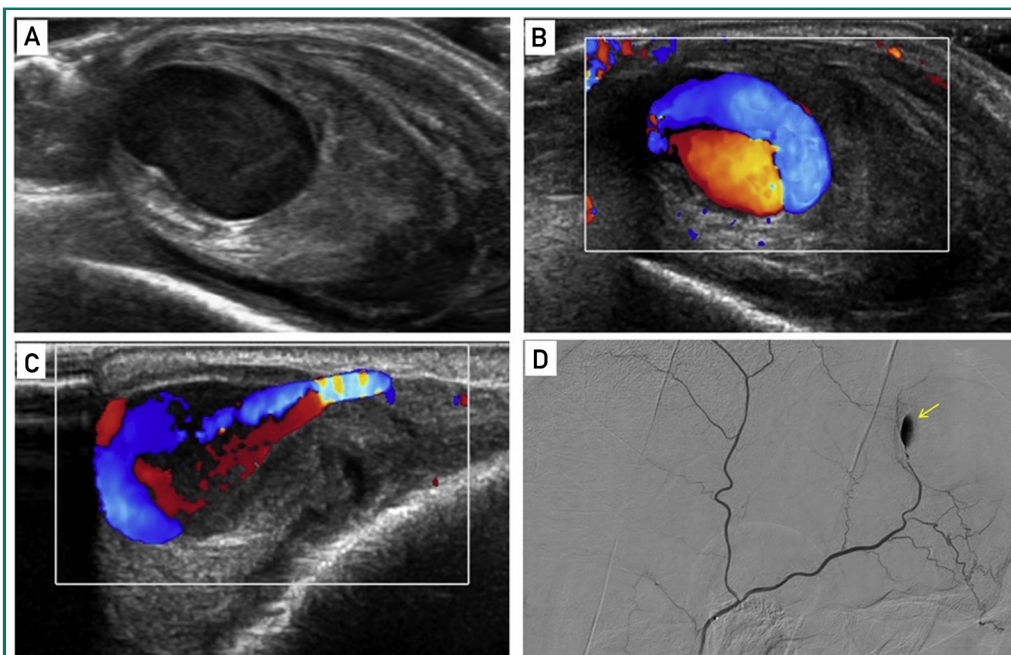


FIGURE 2. (A) Ultrasonography revealing a 1.5-cm anechoic formation within the hematoma. (B,C) Doppler ultrasonography demonstrating direct communication with the frontal branch of the superficial temporal artery and turbulent flow ("Yin-Yang" sign). (D) Angiography showing the pseudoaneurysm of a frontal branch of the superficial temporal artery (**yellow arrow**).

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