

Post Traumatic Inferior Labial Artery Pseudoaneurysm After Lip Laceration: Case Report

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Abstract

We present a case of delayed hemorrhage following traumatic lower lip laceration. Ultrasound-guided thrombin injection for pseudoaneurysm thrombosis allows for radiation-free treatment of superficial pseudoaneurysm and superficial expanding hematoma.

Keywords: Pseudoaneurysm Thrombosis; Lower Lip Laceration; Thrombin

Introduction and Case Report

A 10-year-old girl presented with a laceration to the lower lip post recent scooter collision and injured her lip. She had no previous history of underlying disease. The patient was brought by her mother to the emergency room and noted to have a simple laceration approximately 3 cm at border between vermillion and red lip of lower lip. After establishing that the patient's injuries were limited to the laceration, the repair began by general surgeon in emergency room. Six absorbable simple suture were placed to achieve hemostasis. The patient was observed and had no signs of rebleeding and was discharged on prophylactic antibiotics and instruction to return in 48 hours for a wound check. The patient's wound check at 7 days post-procedure was uneventful. The patient had only minimal swelling and no signs of infection or bleeding.

At 17 days postinjury, the patient presented with bleeding from the wound site in the night, without any history of reinjury. The patient was examined at pediatric surgical outpatient clinic and there was superficial expanding hematoma. Within the lower lip adjacent to the location of the laceration was a non-pulsatile nodule. The patient had minor intraoral bleeding that stopped spontaneously. The radiologist performed a Doppler ultrasound (Figure 1) and noted an area of blood flow consistent with pseudoaneurysm of the inferior labial artery with partially thrombosed. Her hemoglobin was 12 gm. A coagulation profile were done. Mild prolonging time of PT and PTT were demonstrated. Others were within normal limits. Computed tomography angiography (Figure 2) has been utilized to evaluate pseudoaneurysm of the inferior labial artery. The interventional radiologist was consulted. The patient was hemodynamically stable at the time of IR consultation. Under ultrasound guidance, 250 units of thrombin were injected into the pseudoaneurysm using a 24-gauge needle until vascular flow was no longer identified. Color Doppler evaluation of the inferior labial artery and pseudoaneurysm demonstrated persistent occlusion of the pseudoaneurysm with maintained vascular flow. The patient tolerated the procedure well, and was discharged home the following day.

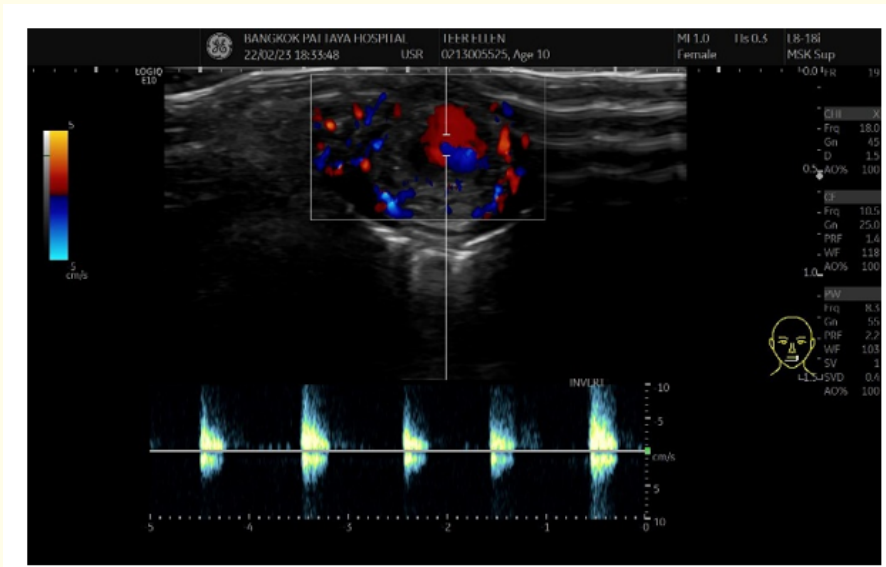


Figure 1: Color doppler ultrasound.



Figure 2: Computed tomography angiography brain.

Discussion

Pseudoaneurysm occur secondary to blunt or penetrating injury to arteries and do not involve equal dilation of the three native vessels layers. Provided blood flow to the focal area of dilation is maintained, pseudoaneurysms continue to grow in size until their eventual rupture and clinically significant exsanguination.

In certain cases of superficial trauma, highly selective catheterization of the injured vessels can become difficult, if not impossible. Thrombin-injection for the management of pseudoaneurysm formation from superficial trauma continues to be employed on a case-by-case basis.

The absolute contraindications for percutaneous injection put forth by the Society of Interventional Radiology were considered. Thrombin injection in this case was efficacious and without clinical complication. There was no need for repeat intervention or surgery.

Conclusion

In summary, ultrasound-guided procedures are minimally invasive and able to achieve the diagnostic and therapeutic efficacy at the hands of our interventional radiologist. Ultrasound-guided thrombin injection treatment can be a method of primary treatment in otherwise clinically stable patients, or an alternative treatment in case where transcatheter embolization can become difficult or fails. This technique has the potential to develop into the mainstay management option of traumatic pseudoaneurysm development in nearly any ultrasound accessible artery [1-4].

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