

LETTER TO THE EDITOR

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Severe allergic reaction: A rare complication of ultrasound-guided injection of thrombin in a femoral pseudoaneurysm

We report the case of an anaphylactic reaction, which occurred a few minutes after an ultrasound (US)-guided thrombin injection of a femoral pseudoaneurysm in an elderly Asian patient. We are aware of only two other similar cases reported in the literature.^{1,2}

A 77-year-old man described a painful pulsatile mass in the groin 4 days after a coronary angiogram. A femoral pseudoaneurysm was confirmed on duplex scanning. After compression therapy for 4 days, the pseudoaneurysm did not resolve; therefore, the patient underwent thrombin injection using bovine thrombin at a concentration of 500U/mL in 0.9% sodium chloride. Three minutes after the injection, the patient developed diffuse itching, severe shortness of breath, and hypotension requiring intubation, and administration of intravenous fluids, epinephrine, and corticosteroids. Symptoms resolved with therapy and the patient was discharged home after 2 days of observation.

The femoral artery is used for diagnostic and interventional vascular procedures including angiograms and stent placements. Iatrogenic pseudoaneurysms of the femoral artery occur in 0.2%–0.5% of diagnostic procedures and up to 8% of vascular interventions and are diagnosed using color Doppler US.^{3,4} US-guided thrombin injection is a quick and minimally invasive procedure with a high success rate and very low complication rate in patients with pseudoaneurysms. However, anaphylaxis is a potentially deadly complication that is often neglected. Bovine thrombin is a plasma-thrombin concentrate material to which immunoglobulin E antibodies can cause anaphylactic reactions.¹ Interventional radiologists and sonologists should be aware of the possibility of allergic reaction to bovine thrombin. Prior to performing an US-guided thrombin injection, it is very important to ask the patient about a history of prior

exposure to bovine thrombin. A patient can be screened by a skin prick test if the patient has a repeat injection of bovine thrombin.

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