

## Drug interaction resulting in massive chest wall hematoma in a patient on therapeutic anticoagulation

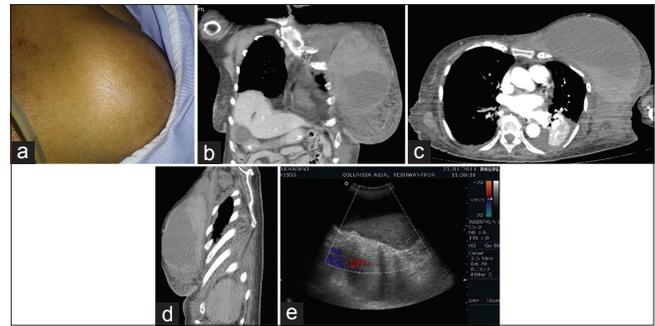
Sir,

The incidence of spontaneous large hematomas is rare compared to several case reports of major intracranial bleed in patients on therapeutic anticoagulation. The most commonly involved anticoagulant is warfarin, used in the prevention of thrombo-embolism in deep vein thrombosis, prosthetic valves, atrial fibrillation, etc.<sup>[1]</sup> The incidence of hematomas requiring invasive intervention is rarely encountered. There is a case of pectoral hematoma reported by Cinar, *et al.*, in a case series, which was managed conservatively.<sup>[2]</sup> We report a case of an elderly woman, on therapeutic anticoagulation for deep-vein thrombosis, who presented with a large left chest wall hematoma requiring embolization of the bleeding vessel.

An 82-year-old female patient was admitted to Intensive Care Unit (ICU) with a history of disorientation for 2 days. She was on therapeutic anticoagulation with warfarin 2 mg OD since 1-year after presenting with chronic deep vein thrombosis due to hyperhomocysteinemia and protein S deficiency and required inferior vena cava filter insertion earlier. Her platelet count and serum creatinine levels were within normal range.

At present, she was found to have urinary tract infection for which ertapenem was started. International normalized ratio (INR) at time of admission was 1.8 and was monitored daily and antibiotic was de-escalated to levofloxacin 500 mg intravenous (IV) OD as per the urine culture report and she was shifted to wards. She was back in ICU 3 days later, with a painful swelling in left breast. Ultrasonogram [Figure 1a], chest X-ray [Figure 1b], and CT chest [Figure 1c-e] showed a large left anterior chest wall hematoma, inseparable from pectoralis major, measuring 15 cm × 8.2 cm axially and 16 cm craniocaudally.

Her hemoglobin had dropped to 4.5, and INR had shot up to 6.22 over 3 days. She was resuscitated with IV fluids and packed red blood cells. Fresh frozen plasma and injection Vitamin K 10 mg were



**Figure 1:** (a) Gross appearance. (b) Chest X-ray. (c) Computed tomography (CT) image coronal section. (d) CT image transverse section. (e) CT image, sagittal section

given to prevent further bleed. But the hematoma continued to increase in size requiring an emergency angio-embolization of a large branch of left internal mammary artery. INR came down to 0.8 next day. Hemoglobin remained stable, and she went home in 3 days. A significant resorption of the hematoma was observed on review, and anti-coagulant therapy was re-started after 10 days.

Hematoma in pectoral muscle has been rarely reported in the literature. Kocer *et al.* described cases of spontaneous intra-pectoral bleeding.<sup>[3]</sup> It was considered that in our patient, interaction between levofloxacin and warfarin could have possibly potentiated the action of warfarin, and even mild physiotherapy could have triggered a bleed.<sup>[4,5]</sup>

This case is rare as it occurred over a very short duration and involved an arterial bleed requiring interventional management. The drop in hemoglobin was a very significant 8%.

The interaction of warfarin with various medications and food substances is well-known. Its life-threatening complication is something that should be kept in mind considering the fact that levofloxacin is a very common antibiotic prescribed by community physicians for common cold, urinary tract, and upper respiratory tract infections. As noted here, the trigger for a torrential bleed could be very trivial as mild physiotherapy.<sup>[4,5]</sup>

To conclude, a careful screening for interactions is required before prescribing medicines for patients on anticoagulation therapy.

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