Asymptomatic Mediastinal Hematoma as a Complication of Ultrasound-Guided Internal Jugular Vein Catheterization

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ABSTRACT
Central venous catheterization is a frequently performed procedure in the intensive care units (ICU) for various treatments such as iv therapy, parenteral nutrition and hemodialysis but occasionally encountered complications can be fatal. Therefore, safe insertion with confirmation of correct positioning of the catheter is vital. Ultrasound (US)-guided insertion of catheters has been used widely, and its safety and efficacy have been demonstrated in several studies. However, this technique is not free from complications, such as carotid artery puncture, hemothorax, pneumothorax and infection. In this case, anterior mediastinal hematoma proceeded after US-guided internal jugular vein (IJV) catheterization.

Key Word: Mediastinal hematom, ultrasound, internal jugular vein catheterization

INTRODUCTION
Central venous catheterization is a frequently performed procedure in the intensive care units (ICU) for various treatments such as iv therapy, parenteral nutrition and hemodialysis but occasionally encountered complications can be fatal. Therefore, safe insertion with confirmation of correct positioning of the catheter is vital. Ultrasound (US)-guided insertion of catheters has been used widely, and its safety and efficacy have been demonstrated in several studies. However, this technique is not free from complications, such as carotid artery puncture, hemothorax, pneumothorax and infection. In this case, anterior mediastinal hematoma proceeded after US-guided internal jugular vein (IJV) catheterization.

CASE
A 74-year-old woman was referred to Gazi University Emergency Department with the triad of symptoms of headache, petechia and thrombocytopenia for management. A computerized tomography (CT) of brain examination revealed a combined epidural and subdural hematoma. She was managed conservatively with observation by the neurosurgical unit. She was admitted to haematology unit and treated with intravenous (IV) steroid and IV immunoglobulin for immune mediated thrombocytopenia. Subsequently she developed tonic-clonic epileptic seizures and required intubation and airway maintenance. She was admitted to ICU for management of low Glasgow coma scale and poor urine output. For the acute renal impairment, following the conservative therapy it was decided to proceed to initiate hemodialysis. She was given IV platelets replacement but there was no rise in the platelet count above 5000 units. Despite the...
Most sensitive test to visualise localised hematoma and visualisation of the mediastinum. US guided IJV catheterisation may significantly reduce the rate of complications however it does not prevent them completely (4,5). This case demonstrates the development of a mediastinal hematoma despite the use of US guidance without any evidence of clinical or hemodynamic signs.

This case suggests that using US does not completely guarantee a complication-free outcome of IJV catheterization and, that catheter placement should be carefully confirmed.

REFERENCES