

Internal jugular vein thrombosis and central venous catheter

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Case presentation

A sixty-seven-year-old gentleman, with atherosclerotic cardiovascular disease, stable angina, and hypertension was admitted to the hospital with several episodes of chest pain. An electrocardiogram revealed ST-T changes in the anterior wall. A coronary angiography followed by an angioplasty resulted in placement of 2 stents for critical lesions on the left anterior descending artery. Within minutes, the patient became hypotensive with signs of hypoperfusion. Bedside echocardiography revealed cardiac tamponade. An emergency pericardial drainage was placed, and the patient taken to the cardiac catheterization laboratory where a repeat angiogram revealed a right coronary artery perforation as well as a small distal branch of the posterior descending artery. Coronary angiography also showed perforation of the first obtuse marginal distally, which was sealed with a dedicated stent. The patient was taken to the operating room where a massive myocardial hematoma was found on the lateral wall of the left ventricle with two areas of active hemorrhage. Control of the bleeding was complex, and a biological fibrin glue was sprayed repeatedly on the left ventricular wall getting the

bleeding to stop. During surgery a triple lumen, 7 French, central venous catheter was placed in the right internal jugular vein. The patient was then transferred to the intensive care unit under hemorrhagic shock, metabolic acidosis, and hyperlactatemia. Once the patient was more stable, when he awoke from his sedatives, he was found to have left hemiplegia and a computed tomography revealed a new ischemic infarct in the right temporo-occipital region. A tracheostomy was planned due to an episode of long respiratory pauses. Neck ultrasonography prior to the procedure revealed a large thrombus on the internal jugular vein (diameter 1.28 cm x 1.55 cm and length of 4.05 cm) involving the central venous line and attached to the wall of the carotid artery (**Figures 1-3**). The patient was treated with low molecular weight heparin, aspirin, clopidogrel, and eventually warfarin. Five days later the patient was extubated. Due to the thrombus risk of infection, extraction and suction of the thrombus was attempted but unsuccessful as the thrombus seemed attached to the vein wall. Medical anticoagulation therapy followed, and the patient was transferred to a rehabilitation facility.

Key words: Central venous access, jugular vein, thrombosis, iatrogenic.

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Figure 1. Jugular vein (JV) thrombus

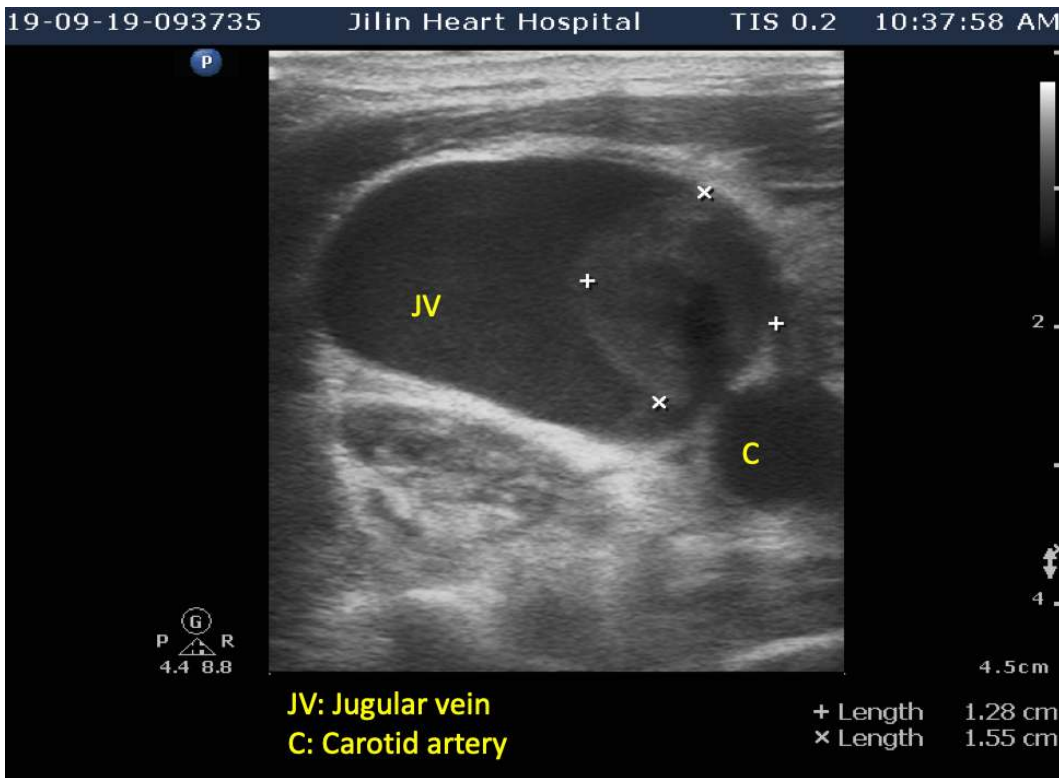


Figure 2. Thrombus involving the central venous catheter (CVC) in jugular vein (JV)

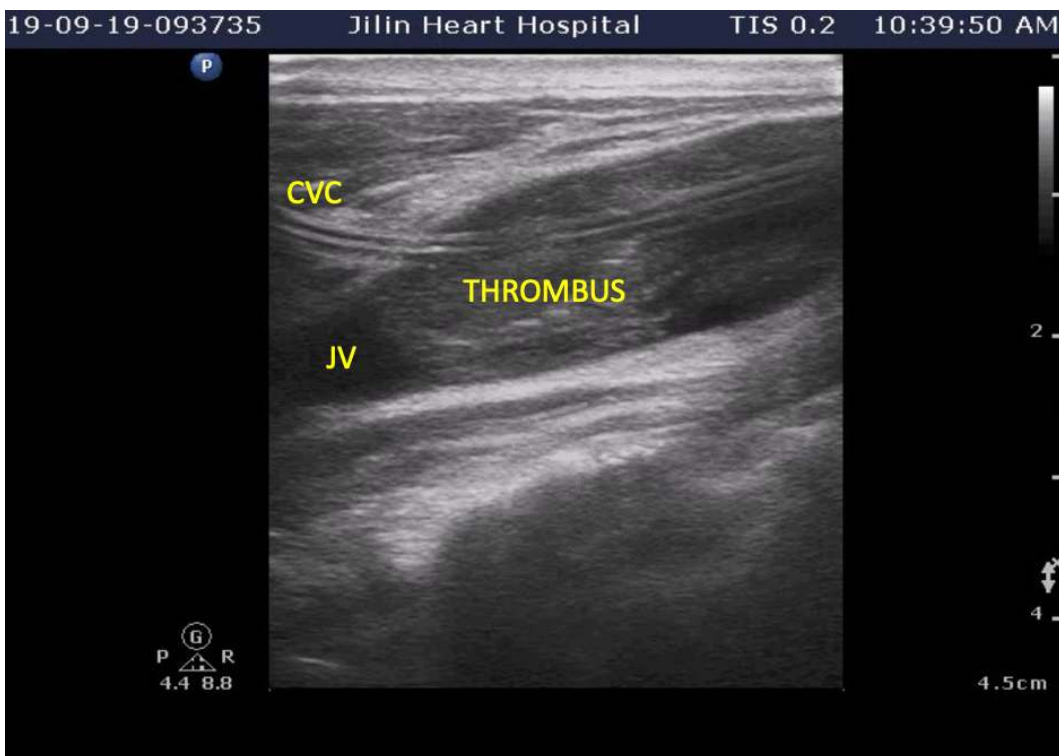


Figure 3. Length of thrombus 4.05 cm

