Internal jugular vein thrombosis from rhino-cerebral mucormycosis: Be careful before cannulation

Sir,

Rhino-cerebral mucormycosis is a relatively uncommon fungal infection of the nasal cavity and para-nasal

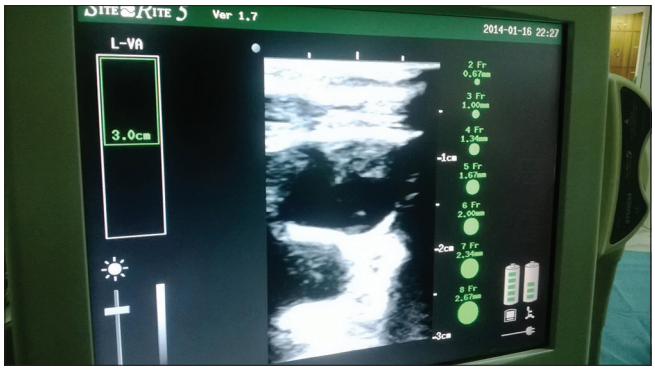

Figure 1: Thrombus in the right internal jugular vein seen in ultrasound image

sinuses that can rapidly progress to the central nervous system and orbit.[1] Immunocompromised patients such as uncontrolled diabetic, bone marrow transplant and those on cancer chemotherapy are at high risk of developing this condition. This condition has also been seen in the absence of clinical risk factors.[2]

A 47-year-old female patient was admitted in our hospital with complains of rhinorrhea, ptosis, proptosis and gradually progressive visual loss. Subsequently, she was diagnosed to be a case of rhino-cerebral mucormycosis in the background of uncontrolled diabetes mellitus. Magnetic resonance imaging head shows involvement of the left maxillary and ethmoid sinuses with involvement of the ipsilateral orbit. A thrombus was noted in the cavernous sinus also. She was started on intravenous amphotericin B, and appropriate glucose control measures were also taken. Anesthesia team was requested for central venous access as she had poor peripheral venous access.

An ultrasound guided right sided internal jugular vein (IJV) cannulation was planned. On ultrasound scanning of the neck vein, a thrombus in the entire length of right IJV in the neck was noticed [Figure 1]. On the left side, even larger size of a thrombus almost completely occluding the IJV was noticed. We abandoned the procedure and asked for a radiological evaluation of the neck veins. An ultrasound Doppler revealed the presence of thrombus in both IJV.

Mucormycosis tends to involve blood vessel and leads to vascular thrombosis. Cavernous sinus thrombosis and internal carotid artery thrombosis has been reported even in clinically stable patients.[3] IJV thrombosis is a rare but potentially fatal condition. Trauma to the vein, coagulopathy, neck infection and malignancy are most important causes of IJV thrombosis.[4,5] It can give rise to septic and pulmonary embolism. As these patients require long-term intravenous drug therapy anesthesiologists are often asked to put a central venous access. When a thrombus is *in situ*, there will always be a significant possibility that the thrombus may dislodge distally at time of venipuncture, guide wire insertion or catheter insertion. because of nonavailability of ultrasound machine in many circumstances, IJV cannulation is being performed by anatomical landmark technique. These patients may be at risk of embolic complications from "blind" IJV cannulation. Hence looking for and exclusion of IJV thrombosis before neck vein cannulation is very important for safety of the patients. Hence, we recommend that blind IJV cannulation should be avoided in these patients, and an ultrasound Doppler screening may be made before attempting IJV cannulation.

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Website: www.ijccm.org

DOI: 10.4103/0972-5229.138167