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Full Length Review Article

IDIOPATHIC THROMBOSIS 0F UNILATERAL EXTERNAL JUGULAR VEIN

Dr. Krishna Prasad, *Dr. Vivek, H., Dr. Praveen, G.P., Dr. Muni Reddy and Dr. SandeepReddi

Department of Surgery, Sri Devaraj Urs Medical College and Research Centre, Kolar, India

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ABSTRACT

The authors report a patient with the rare presentation of unilateral external jugular vein thrombosis. A 45 year male presented with swelling over left side of the neck and puffiness of the face. Physical examination revealed cord like thickening of left external jugular veins. Doppler studies showed thrombosis of left external jugular vein. No malignancy, coagulation disorder, or any infection was demonstrable. Ligation and excision of thrombosed part of EJV was done. A regular follow-up for 1 year was done, but no other cause could be found and there was no progression of the disease.

INTRODUCTION

Venous thrombosis is mainly determined by 3 factors, which constitute a triad called Virchow's triad: hypercoagulability, stasis, and endothelial injury (Dickson, 2004). Venous thrombosis commonly occurs in the lower extremities since most of the blood resides there and flows against gravity. The veins of the lower extremities are dependent on intact valves and fully functional leg muscles. In contrast, the veins of the neck, specially the jugulars, have distensible walls which allow flexibility during respiration and in addition, the blood directly flows downward towards the heart. Thus, thrombosis of neck veins is uncommon (Meissner, 2005 and Kimura, 1999).

Presentation of case

45 year old male, a construction worker with no significant past medical history presented with painless unilateral neck swellings over left sideassociated with facial puffiness and engorgement, which was first noticed by the patient 1 month earlier and reportedly had worsen gradually. There was no history of trauma, cannulation of the neck vessels, weight loss, fever, night sweats, loss of appetite, spontaneous bleeding, chronic pain, shortness of breath, wearing tight neck collar, travel history, exposure to sick contacts, previous similar episodes, previous history of deep vein thrombosis, or family history of similar symptoms. The patient was not taking any medications. On physical examination, the patient was afebrile, with normal vital signs.

The patient's face was plethoric with moderate facial swelling independent of movement of neck or raising the arms. The neck examination revealed cord-like structures on left side measuring about 4 cm in length extending from the base of the neck to the angle of the mandible. There was no lymphadenopathy. Physical examination of the cardiovascular system, chest, abdomen, central nervous system, genitourinary system was unremarkable. Initial lab investigations, including complete blood count, basic metabolic panel, liver function tests, and kidney function parameters, were within normal limits.

Investigation

Pre-operative doppler ultrasound of the neck revealed non-compressible left external jugular vein without a flow, suggesting thrombosis of external jugular vein (Fig. 3).

Corresponding author: Dr. Vivek, H.,
Department of Surgery, Sri Devaraj Urs Medical College and Research Centre, Kolar, India.

Fig. 1

Fig. 2.

Pre-operative picture in Left lateral (Fig.1) and anterior view (Fig.2)

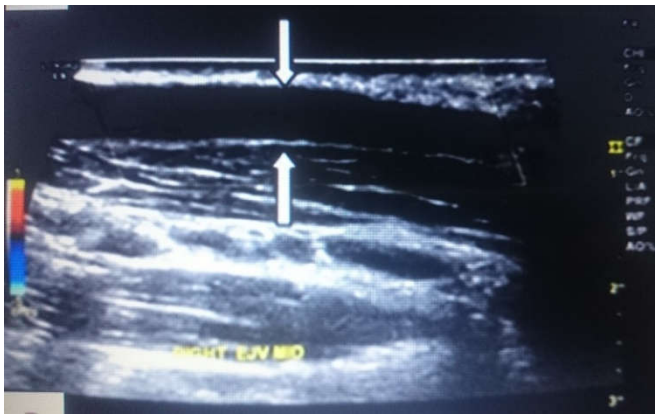

Fig. 3. Thrombosed EJV without blood flow

Per-operative findings

On exploration, revealed a thick cord like structure measuring 4cm, firm to hard in consistency (Fig-4), which was ligated and excised (Fig. 5).

Fig. 4. Ligation of EJV

Fig.5. Dissected specimen of EJV

Histopathology

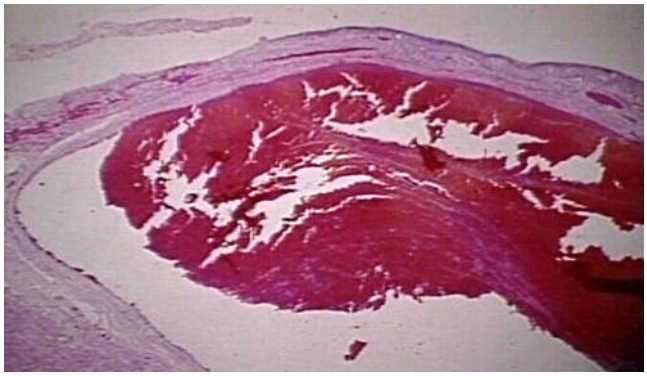

Fig. 6. Histopathology report confirmed thrombosis of External jugular veinwith out malignancy

DISCUSSION

Thrombosis of the external jugular vein is a rare and possibly under diagnosed condition. Some of the causes include central venous catheterization, head and neck infections, such as in Lemierre's syndrome, malignancy, aneurysm, intravenous drug abuse, idiopathic and iatrogenic injury (Colomina *et al*., 2000 and Liu, 1996). Increasing age, obesity, and associated illness have also been attributed as causes. External compression over the vein has also been reported as a possible cause (Kalan, 1985).

Clinically thrombosis of the external jugular vein may appear as a swollen, painful elongated mass in the neck. There may be associated phlebitis (Schwartz, 1999). Further imaging of the external jugular vein includes CT or ultrasound scan (Gbaguidi, 2011). Treatment of a thrombosed external jugular vein is controversial and is dependent on the underlying cause.The risk of deep vein thrombosis associated with external jugular vein thrombosis is less clear (Karkos *et al*., 2009). It is important that the underlying cause of the thrombosis is identified and addressed. This may require further investigation and an assessment by several different specialities due to the wide range of possible causes for thrombosis.

Conclusion

Unilateral idiopathic external jugular veins thrombosis is extremely rare and can be an indicator of early malignancy or hidden infection. The present case is particularly notable because of the unusual presentation ofexternal jugular vein thrombosis in a 45year male, without malignancy.Careful follow-up is important to rule-out any hidden infections or malignancy.

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