

**SPONTANEOUS PSEUDOANEURYSM OF EXTERNAL JUGULAR VEIN: A RARE
CAUSE OF NECK SWELLING****Dr. Monika Negi* and Dr. Akhilesh Negi**

Association: Advance Diagnosis Centre and Multispeciality Hospital, Kangra, Hp.

***Corresponding Author: Dr. Monika Negi**

Association: Advance Diagnosis Centre and Multispeciality Hospital, Kangra, Hp.

Article Received on 16/08/2023

Article Revised on 06/09/2023

Article Accepted on 26/09/2023

INTRODUCTION

Most aneurysms and pseudoaneurysms are usually found predominantly involving arteries. Venous origin aneurysms are rare and typically iatrogenic. About 77% of the venous aneurysms are found in lower limb extremities. EJV pseudoaneurysms are extremely a rare entity and are comparatively even less common than the IJV pseudoaneurysms.^[1,2] A study published in 2018 found less than 10 well-documented cases of EJV aneurysms accessible.^[3]

CASE REPORT

A 45yr old female presented with the complaint of a painless swelling in the left lower cervical region. She noticed the swelling about one year prior to the presentation which increased in size progressively. She had no history of trauma or surgery. On examination, soft, compressible, non-pulsatile mass was seen in the left lower cervical region.

Ultrasonography revealed a compressible well defined anechoic cystic structure seen in the subcutaneous plane in left lower cervical region, with its max diameter of

approx 4.3cm. It was seen to have communication with left EJV. No other venous channels were seen communicating with the lesion. Color Doppler revealed venous flow within with alternatively positive and negative waveforms indicative of typical pseudoaneurysm on spectral Doppler.

Final diagnosis of EJV pseudoaneurysm was made and patient was further advised to undergo surgical excision. However, patient denied to undergo any surgical intervention at the time and thereby was kept on follow up.

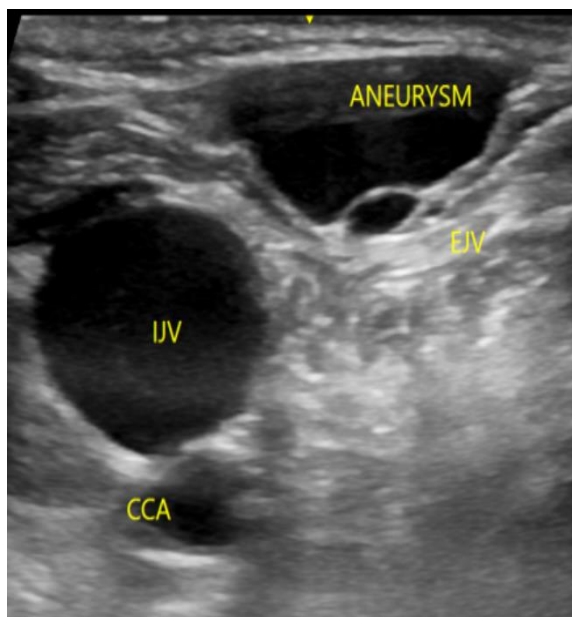


Figure 1(a)



Figure 1(b)

Figure 1: Grey scale ultrasound demonstrates a saccular outpouching arising from the anterior wall of EJV and reveal the communicating neck of pseudoaneurysm with the vein in Figure 1(b).

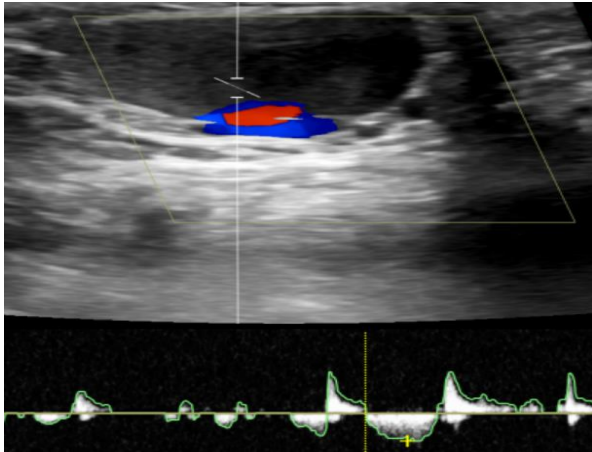


Figure 2: Spectral Doppler of the pseudoaneurysm shows a typical to-and-fro waveform.

DISCUSSION

Venous aneurysms are very rare compared to arterial aneurysm due to the low pressure venous system. EJV pseudoaneurysm is an exceedingly rare entity. The exact incidence of the entity is unknown.^[1,4,5,6] Despite trauma being a common risk factor for venous pseudoaneurysm, it is less commonly associated with EJV pseudoaneurysm. Other causes include congenital or acquired. Causes of acquired aneurysms include trauma, thoracic outlet obstruction, inflammation, degeneration, and increased venous pressure.^[1,4,5] Interestingly enough our patient developed it idiopathically.

The most common presentation is a palpable cervical mass which changes size on Valsalva maneuver.^[7] Other symptoms include pain, dysphagia and hoarseness.^[6] Commonly associated complications include thrombus formation or thrombophlebitis, rupture and pulmonary embolism.^[5,6]

US scan can be a useful first investigation to differentiate a pseudoaneurysm from other neck masses like lymph node enlargement, abscess, cystic hygroma or arterial aneurysm.^[4,5] CT or MRI may further and more accurately help to achieve the final diagnosis.

Doppler ultrasound is the gold standard and best imaging modality. On grayscale, an anechoic structure seen communicating with the vein. Color Doppler reveals internal flow with the typical “yin-yang” appearance. Spectral Doppler demonstrates a to-and-fro waveform in the pseudoaneurysm neck.^[10] CT or MRI are second-line modalities and more accurately demonstrate size, extent, and connection to adjacent structures.^[5,6]

No intervention is indicated in the asymptomatic patient. If asymptomatic, patients can be safely discharged with outpatient referral to surgery for cosmetic excision. Approximately 89% of iatrogenic pseudoaneurysms heal spontaneously without intervention.^[8] Surgical intervention is commonly indicated for cosmetic reasons or when complications such as thromboembolism, rupture or thrombophlebitis arise.^[9]

CONCLUSION

Our case report suggests that, despite being an exceptional rarity, spontaneous EJV aneurysms should be included in the differential of a patient presenting with a painless, cystic lateral neck mass which show color uptake on doppler study. Clinical awareness of the differential diagnosis allow early diagnosis, thereby improves diagnostic outcomes.

REFERENCES

1. Başbuğ HS, Bitargil M, Karakurt A, Özışık K. External jugular vein aneurysm in a young woman: an uncommon cause of neck mass. *Int J Cardiovasc Acad.*, Mar 1, 2016; 2(1): 16-8.
2. Chapman DR, Ho RE, Gangemi A. A case report of a rare, spontaneous external jugular vein aneurysm. *International Journal of Surgery Case Reports*, Jan 1, 2018; 52: 8-10.
3. Saadway A. Idiopathic EJV pseudoaneurysm. *Austin J Radiol.*, 2021; 8(11): 1170.
4. Drakonaki EE, Symvoulakis EK, Fachouridi A, et al. External jugular vein aneurysm presenting as a cervical mass. *Int J Otolaryngol*, 2011; 2011: 485293.
5. Grigorescu I, Dumitrascu DL, Manole S, et al. Pseudoaneurysm of the external jugular vein communicating with the internal jugular vein. case report. *Med Ultrason*, 2012; 14(3): 257-60.
6. Karapolat S, Erkut B, Unlu Y. Multiple aneurysms of the left external jugular vein. *Turk J Med Sci.*, 2005; 35: 43-45.
7. McCreedy RA, Bryant MA, Divelbiss JL, et al. Subclavian venous aneurysm: case report and review of the literature. *J Vasc Surg*, 2007; 45(5): 1080-2.
8. Abdel-Aty Y and Bellew M. Endovascular management of a refractory pseudoaneurysm of the sternocleidomastoid artery caused by attempted internal jugular central line placement with long term follow-up: a case report and review. *Case Rep Otolaryngol*, 2018; 2018: 8324908.
9. Lee HY, Lee W, Cho YK, et al. Superficial venous aneurysm. Reports of 3 cases and literature review. *J Ultrasound Med.*, 2006; 25(6): 771-6.
10. Mahmoud MZ, Al-Saadi M, Abuderman A, Alzimami KS, Alkhorayef M, Almagli B, Sulieman A. " To-and-fro" waveform in the diagnosis of arterial pseudoaneurysms. *World J Radiol*, May 5, 2015; 7(5): 89.