

An Unusual Case of IJV Thrombosis

Narahari Kavya¹, Vankudoth Swathi², Dr. K. Ravinder Reddy³

¹Post Graduate in Internal Medicine, Prathima Institute of Medical Sciences

²Post Graduate in Internal Medicine, Prathima Institute of Medical Sciences

³Consultant Cardiologist, HoD and Professor of Medicine, Prathima Institute of Medical Sciences, Email: rrkasturi[at]gmail.com

Abstract: *Internal jugular vein thrombosis is a rare but potentially life threatening condition occurring in the intracranial internal jugular vein or its junction with the subclavian vein. This abstract presents a case study of a 50 year old obese patient with atypical chest pain and shortness of breath, diagnosed with internal jugular vein thrombosis. The investigation involved various tests ruling out ischemic causes and ultimately confirming subsegmental pulmonary thromboemboli. Thrombophilia work up was carried out and protein s deficiency was found. The patient responded well to anticoagulation therapy, and there is a need for further research to establish guidelines and standardised treatment approaches*

Keywords: Internal jugular vein thrombosis, diagnosis, treatment, anticoagulation therapy, thrombophilia workup

1. Introduction

Internal jugular vein thrombosis refers to an intraluminal thrombus occurring anywhere from the intracranial internal jugular vein to the junction of the internal jugular and subclavian vein to form the brachiocephalic vein. It may occur as a complication of neck infections, surgery, central venous access, local malignancy, polycythemia, hyperhomocysteinemia, IV drug abuse

2. Case Presentation

50 year, old obese driver by profession was seen in cardiology outpatient department for atypical chest pain, shortness of breath with a subacute course 1 to 3 progressive over 3 weeks. He denies any history of smoking, recent surgery, trauma, infections, Intravenous drug abuse or catheter related procedures. On examination he was found to have borderline high blood pressure (140/100 mm of hg, with BMI 32, had no systemic desaturation, non pulsatile JVP increase without any respiratory variation.

3. Investigations

Basic work up was done to rule out ischemic cause for chest pain by Electrocardiogram, 2D echocardiogram with no evidence of cor pulmonale, Thread mill test, with minimal elevation of trop I 1.8ng/ml. Brain natriuretic peptide levels were normal with increased plasma dimers. So workup was done for Pulmonary thromboembolism. Computed tomography chest showing subsegmental Pulmonary thromboemboli. Neck vessel Doppler showing near total absent colour uptake on colour Doppler and echogenic foci filling the lumen of Right internal jugular vein which is decreased in caliber. Magnetic resonance venography was done to rule out intracranial extension of thrombus. As there is no obvious risk factor for thromboembolic disease, we advised investigations with a thrombophilia work up. Anti nuclear antibodies were negative, anti-nucleoprotein-antibodies, antinucleosome antibodies, anticardiolipin antibodies, anti b2 glycoprotein were negative. Antithrombin 3, homocysteine, protein c, factor 5 were within normal

limits and were tested before introduction of anticoagulants, only protein s deficiency was found.

Treatment was initiated and in fractionated heparin for 48 hrs, symptoms regressed. Then patient discharged on oral novel anticoagulants after 5 days of admission. On follow up neck doppler showed partial recanalization and his plasma were negative at the end of 1month.

4. Discussion

Internal jugular vein thrombosis is a rare but potentially life-threatening condition that is often caused by central venous, catheterization, trauma, or infection. In this case, the patient had no risk factors for Internal jugular vein thrombosis. The management of Internal jugular vein thrombosis typically involves anticoagulation therapy with or without thrombolytic therapy.



CTPA image showing segmental & subsegmental PTE



CTPA image showing segmental & subsegmental PTE

5. Conclusion

Diagnosis and treatment with anticoagulation therapy can lead to successful resolution of the thrombus and prevent complications such as pulmonary embolism. The management of internal jugular vein thrombosis is heterogenous and currently based on the management of lower extremity deep-vein thrombosis, with a low rate of complications. The lack of guidelines and large series means that the modalities of diagnosis and treatment type and duration are variable. Given the low prevalence of internal jugular vein thrombosis, large, randomized studies would be hard to carry out. Data from our literature review suggest that treatments could tend towards those used for lower limb deep-vein thrombosis, but that the modalities of diagnosis and the duration of treatment and follow-up should be clarified

References

- [1] Karakitsos D, Labropoulos N, De Groot E, Patrianakos AP, Kouraklis G, Poularas J, Samonis G, Tsoutsos DA, Konstadoulakis MM, Karabinis A. Real-time ultrasound-guided catheterisation of the internal jugular vein: a prospective comparison with the landmark technique in critical care patients. *Crit Care*. 2006;10(6):R162. [PMC free article] [PubMed]
- [2] Major KM, Bulic S, Rowe VL, Patel K, Weaver FA. Internal jugular, subclavian, and axillary deep venous thrombosis and the risk of pulmonary embolism. *Vascular*. 2008 Mar-Apr;16(2):73-9.[PubMed]4.
- [3] Gbaguidi X, Janvresse A, Benichou J, Cailleux N, Levesque H, Marie I. Internal jugular vein thrombosis: outcome and risk factors. *QJM*. 2011 Mar;104(3):209-19. [PubMed]5.
- [4] Saber W, Moua T, Williams EC, Verso M, Agnelli G, Couban S, Young A, De Cicco M, Biffi R, van Rooden CJ, Huisman MV, Fagnani D, Cimminiello C, Moia M, Magagnoli M, Povoski SP, Malak SF, Lee AY. Risk factors for catheter-related thrombosis (CRT) in cancer patients: a patient-level data (IPD) meta-analysis of clinical trials and prospective studies. *J Thromb*

- Haemost*. 2011 Feb; 9(2):312-9. [PMC free article] [PubMed]6.
- [5] Kommareddy A, Zaroukian MH, Hassouna HI. Upper extremity deep venous thrombosis. *Semin Thromb Hemost*. 2002 Feb; 28(1):89-99. [PubMed]7.
- [6] Lip GY. Implications of the CHA(2)DS(2)-VASc and HAS-BLED Scores for thromboprophylaxis in atrial fibrillation. *Am J Med*. 2011 Feb; 124(2):111-4. [PubMed]8.
- [7] Flinterman LE, Van Der Meer FJ, Rosendaal FR, Doggen CJ. Current perspective of venous thrombosis in the upper extremity. *J Thromb Haemost*. 2008 Aug;6(8):1262-6.[PubMed]9.
- [8] Golpe R, Marín B, Alonso M. Lemierre's syndrome (necrobacillosis). *Postgrad Med J*. 1999 Mar; 75(881):141-4. [PMC free article] [PubMed]10.