

Case Report

MONDOR'S DISEASE

Komala N ^{*1}, Roopa Kulkarni ², Kapil Dev M ³.

^{*1} Associate professor, Department of Anatomy, M. S. Ramaiah Medical College, Bangalore, Karnataka, India.

² Senior Professor, Department of Anatomy, M. S. Ramaiah Medical College, Bangalore, Karnataka, India.

³ Assistant Professor, Department of Anatomy, Karpagam faculty of Medical sciences and Research, Coimbatore, Tamil Nadu, India.

ABSTRACT

Mondor's disease is the chronic inflammation (thrombophlebitis) of superficial veins of thoracoabdominal or thoraco epigastric region. Very few cases have been reported so far. The causes are numerous and have been mentioned as trauma, inflammation of skin, following breast surgery in cancerous condition, excessive physical activity, compressive bandages, tight clothing, infections and benign or malignant breast tumours. In the present case there was chronic thrombophlebitis of lateral thoracic vein, which was observed on the right pectoral region in middle aged male cadaver. It appeared as a thick, bluish coloured, cord like structure, seen in place of lateral thoracic vessels. When traced proximally, it was opening into the right subclavian vein immediately deep to the right clavicle. Histopathological examination confirmed the vein which was showing destruction of tunica intima as in chronic inflammatory condition. The lumen showed presence of clot. The complication of Mondor's disease may lead to the spread of inflammation to other regions, clot formation, detachment of the clot leading to thrombo embolism.

KEY WORDS: Thrombophlebitis, Mondor's disease, Superficial veins, Thoraco epigastric veins, Thoracoabdominal veins.

Address for Correspondence: Dr. Komala N, Associate Professor, Department of Anatomy, M.S.Ramaiah Medical College and Hospitals, Bangalore – 54. Karnataka, India.

Phone No: Office – 080. 23605408 Ext. 408 Mobile- 9480259177 **E-Mail:** komas2001@yahoo.com

Access this Article online

Quick Response code



DOI: 10.16965/ijar.2014.517

Web site: International Journal of Anatomy and Research
ISSN 2321-4287
www.ijmhr.org/ijar.htm

Received: 17 Oct 2014

Peer Review: 17 Oct 2014 Published (O):30 Nov 2014

Accepted: 03 Nov 2014 Published (P):31 Dec 2014

INTRODUCTION

Mondor's disease is a very rare condition in which there is chronic thrombophlebitis of superficial veins of the thorax and of anterolateral thoraco abdominal wall [1]. The most commonly affected veins are the lateral thoracic vein, thoraco epigastric vein, superior thoracic vein etc [2]. It was first reported in 1869 by Faage CH and in 1939 it was described by a surgeon Henry Mondor [3, 4]. But due to lack of awareness of its occurrence there was improper clarification regarding the epidemiology of the

disease, etiology and its pathogenesis. Thrombophlebitis of the superficial veins of thorax or thoraco epigastric region can occur following excessive physical activity, compressive bandages, tight clothing. It occurs in case of trauma or some inflammatory condition of the skin in that region. It can also occur following breast biopsy or breast surgery. [5, 6, 7, 8]. The most common clinical manifestations are painful subcutaneous cord, sensation of tension and skin retraction. Anatomically the affected veins may be the lateral thoracic, thoraco epigastric and

superficial epigastric veins. [9]. In the present study, an abnormally thickened lateral thoracic vein was identified on the right side of the chest wall of a middle aged male cadaver, at the level of fifth intercostal space in the anterior axillary line that extended upwards and medially and drained into right subclavian vein below the clavicle. This was identified as Mondor's disease or chronic thrombophlebitis of the lateral thoracic vein.

MATERIALS AND METHODS

During the routine dissection of superior extremity, in formalin fixed, middle aged male cadaver, during the period 2012-2013, in M.S. Ramaiah Medical College, Bangalore, a thickened cord like structure was noted on the right pectoral region. It was bluish in colour. It was neatly dissected from commencement to termination and photographs of the same were taken. A small piece was sent for histopathological examination.

CASE REPORT

In the present case, an abnormally thickened lateral thoracic vein was identified. (Fig. No 1). The vein commenced from the right side of the chest wall at the level of fifth intercostal space in the anterior axillary line and extended upwards and medially and drained into right subclavian vein below the clavicle. It had produced a groove along its course on the pectoralis major muscle (Fig. No 2). It was diagnosed as chronic thrombophlebitis of lateral thoracic vein (Mondor's disease) and section of the vein was sent to histopathology. Histopathological examination confirmed the vein which was showing destruction of tunica intima as in chronic inflammatory condition. The lumen showed presence of clot. (Figure No. 3 and 4).

Fig. 1: Abnormally thickened lateral thoracic vein.

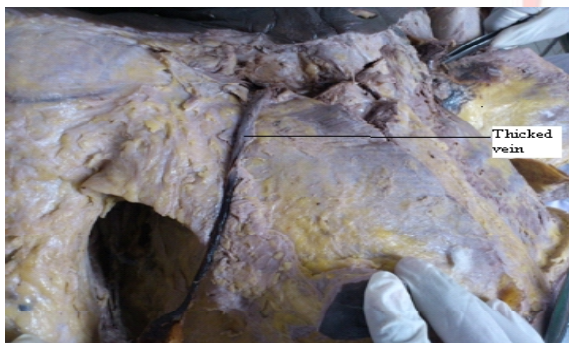


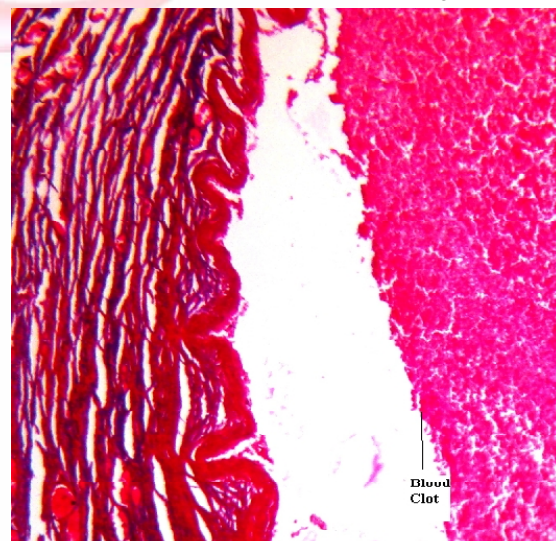
Fig. 2: A groove along its course on its deeper surface. (Vein is lifted up to show the groove).



Fig. 3: Histopathological examination of vein: VVG (Verhoeff-Van Gieson) Stain.



Fig. 4: Histopathological examination of vein: MTC (Masson's Trichrome staining).



DISCUSSION

Mondor's disease was first described by Henri Mondor in 1939 as string phlebitis [10]. A case was reported earlier in which a 50 year old female presented with history of hard, linear cord like mass at the upper outer quadrant of the right breast associated with mild tenderness

Ultrasound showed a non-compressible, hypoechoic undulating tubular structure measuring 2.2 X 0.3 X 0.5 cm in the subcutaneous fat. Color Doppler imaging revealed no flow in this structure although arterial flow was observed adjacent to it, suggesting that it may be a thrombosed superficial vein [8]. In another study reported, out of 63 cases of Mondor's disease (57 women and 6 men) 31 patients had no apparent cause, 3 cases were due to myeloma, 8 cases were due to accidental local trauma, 7 cases had iatrogenic origin, 6 cases due to inflammatory process and 8 cases due to breast cancer. It may be possibly due to physical strain, tight dressings, tight fitting bras and in case of axillary shaving. It has also been observed in some blood dyscrasias [5]. In another report, out of 4 cases (2 men, 2 women), no case was associated with malignant disease or hypercoagulability [9].

The condition though benign and self limited, has been associated with breast cancer. It requires only symptomatic therapy [10]. Subcutaneous penile vein thrombosis also has been described. Similar cording may rarely occur in the groin, abdomen, arm and axilla. In the axilla it may be termed the axillary web syndrome and may be evident after axillary lymph node dissection and sentinel lymph node biopsy [11].

It is a self limiting disorder and can be treated by medical line but rarely thrombophlebitis of these veins, can progress into deep venous system, and may cause pulmonary embolism or embolism into any of the vital organs.

The pathophysiology has been explained as pressure on the vein with stagnation of blood or as direct trauma to the vein itself. It also could be due to contracting and relaxing of pectoral muscles which cause repeated stretching and relaxing of the veins lying superficially. It usually involves any age group but most commonly between 30 and 60 years with no racial or ethnic predilection.

Differential diagnosis: It has to be differentiated from Lymphangioma, lymphangiectasis, Erythema nodosum, cellulitis and metastatic carcinoma [11].

Histopathological features of the vein were

observed. Verhoeff-Van Gieson (VVG) (Figure No. 3). Staining for Elastic Fibers and Masson's Trichrome staining for collagen fibers were negative. (Figure No. 4) There was damage to tunical intima of the vein. There was abundant blood clot present in the lumen.

CONCLUSION

Mondor's disease or chronic thrombophlebitis of the superficial veins of the thorax is an uncommon condition and is rarely associated with breast cancer. It involves lateral thoracic vein, thoraco epigastric vein and any superficial veins in axilla, breast or penis. It is a self limiting disorder and appears like a cord underneath the skin. Initially it may be painful but later it becomes a painless condition. In the present study a cord like lateral thoracic vein was observed on the right side. On examination it had produced a groove on the deeper aspect on the pectoralis major muscle. It was terminating into the right subclavian vein deep to clavicle. Histopathological diagnosis of the variation found was in favor of a vein with damaged intima. It may be possibly due to physical strain, tight dressings, tight fitting bras and in case of axillary shaving. It has also been observed in some blood dyscrasias.

Acknowledgements

We thank Dr. Ramaswamy, Professor and Head of the department of Pathology, PES Institute of Medical Sciences and Research, Kuppam for the confirmed histopathological report of the suspected vein.

Conflicts of Interests: None

REFERENCES

- [1]. Shetty MK, Watson AB. Mondor's disease of the breast: sonographic and mammographic findings. *AJR Am J Roentgenol.* 2001; 177(4):893-896.
- [2]. Pugh CM, DeWitty R. Mondor's disease. *J Natl Med Assoc.* 1996; 88(6):359-363.
- [3]. Faage CH. Remarks on certain cutaneous affections. *Guys Hosp Rep (3rd series)* 1869;15:295-302.
- [4]. Mondor H. Tronculite sous-cutané subaigue de la paroi thoracique antero-laterale. *Mem Acad Chir (Paris),* 1939; 65:1271-1278.
- [5]. Catania S, Zurrada S, Veronesi P, Galimberti V, Bono A, Pluchinotta A. Mondor's disease and breast cancer. *Cancer.* 1992; 69(9):2267-2270.
- [6]. Hou MF, Huang CJ, Huang YS, et al. Mondor's disease in the breast. *Kaohsiung J Med Sci.* 1999; 15(11):632-639.

- [7]. Bejanga BI. Mondor's disease: analysis of 30 cases. *J R Coll Surg Edinb.* 1992; 37(5):322–324.
- [8]. Siti Kamariah CM, Humairah SC et al. Mondor's disease, *The international medical journal Malaysia.* 2011;10(1): 47 – 49.
- [9]. Tomomi Hasegawa and Yutaka Okita, Mondor's Disease in the arm after intravenous chemotherapy following breast cancer surgery, *Ann. Vasc. Dis.* 2010; 3(3): 244-246.
- [10]. F. Charles Brunicaudi, Dana K. Anderson, Timothy et al. *The breast, principles of general surgery*, 9th edn. Chapter 17, page – 433.
- [11]. Robert A Schwartz, Dirk M Elston, *Mondor Disease.* Medscape, 2013. <http://emedicine.medscape.com/article/1087099-overview>, accessed on 17-10-2014.

How to cite this article:

Komala N, Roopa Kulkarni, Kapil Dev M. MONDOR'S DISEASE. *Int J Anat Res* 2014;2(4):660-663. **DOI:** 10.16965/ijar.2014.517

