ROUND LIGAMENT VARICOSITY IN A CHILD: A RARE CASE

Apoorva Kulkarni, Abhaya Gupta, Vishesh Dikshit, Paras Kothari, Geeta Kekre
Department of Pediatric Surgery, Lokmanya Tilak Municipal Medical College and Government Hospital, Mumbai, India

Abstract
Round ligament varicosities are a rare disorder seen in gravid females and is often mistaken for complicated inguinal hernia. We present a very rare case of a 2 years old female child who presented with intractable pain in the right inguinal region, found to be a round ligament varicosity. Relief was achieved only after excision of the mass. A diagnostic laparoscopy was also done to confirm the presence of normal ovaries.

Keywords: varicosity, inguinal, child, round ligament

Introduction
Round ligament varicosity is a rare occurrence in a child. It is seen mainly in pregnant females due to compression of the venous system. Our patient presented with swelling and pain the inguinal region. We describe this rare case in a 2-year-old female child, treated with excision of the varicosity.

Case report
A 2 years old female child presented with a painful swelling in the right inguinal region for 1 month. There was history of fine needle aspiration cytology (FNAC) done from the swelling which was followed by sudden increase in size. The FNAC was reported as “Blood mixed aspirate”. There was no history of reducibility of this swelling. Cough impulse was absent. The parents also complained of a slight difference in the size of the two calves since birth, with the right one seeming slightly bigger than the left.

On examination, there was a 4 x 3 cm tender firm swelling in right inguinal region (Fig. 1). There was no discrepancy in lower limb length but the right calf circumference was bigger than left by 1 cm.

The ultrasonography (USG) of the inguino-labial region revealed a well-defined hetero-genously hypoechoic lesion 5.6x2.6 cm in size. There was another similar lesion 1.6x0.9 cm adjacent but separate from it. These two possibly represented hematomas. There were also features suggestive of right sapheno-femoral junction varix (Fig. 2). Right lower limb venous Doppler was suggestive of hematoma in the inguinal region, venous malformation of the saphenous vein and the popliteal vein. There was no evidence of arterio-venous fistula.

Figure 1. Swelling in right inguinal region

Correspondence
Apoorva Kulkarni
Department of Pediatric Surgery
Lokmanya Tilak Municipal Medical College and Government Hospital
13 Akshay, KC Road, Bandra Reclamation,
Bandra (W), Mumbai-400050, Maharashtra, India.
E-mail: apookool@gmail.com
MRI of the right lower limb showed abnormal vessels and vascular spaces in the right gluteus, thigh and leg suggestive of low flow venous malformations, sapheno-femoral varix and hematoma in the right inguinal region extending into the mons pubis with abnormal vessels around it representing part of the venous malformation. There was no evidence of AV fistula. All blood investigations were normal.

As the patient was continuously in pain despite being on analgesics, she was taken up for excision of the swelling. A right supra inguinal incision was performed and deepened to expose the external oblique aponeurosis. A well-defined firm mass of 6x3 cm was seen just below the superficial inguinal ring and adherent to the round ligament (Fig. 3). This mass had areas of hematoma. At this point, there was a suspicion that the mass may be a herniated, torted and necrosed right ovary, hence a diagnostic laparoscopy was done by putting in a 5 mm umbilical port. The presence of both ovaries in their natural lie was confirmed. Both the deep inguinal rings were noted to be closed. The mass was then excised en-mass and sent for histo-pathological analysis. No feeding vessels were found supplying the vascular mass, hence there was minimal bleeding. The mass was not extending retroperitoneally. Hemostasis was attained and the incision closed.

Post op recovery was uneventful and the patient was given compression stockings to wear.

The histopathology report came as “fibro-collagenous tissue with thick walled vessels of varying caliber, some with clots, suggestive of vascular malformation”.

**Discussion**

Round ligament varicosities are a rare entity and seen almost exclusively in pregnant females. Till 2016, less than 20 cases have been reported internationally in pregnant women [1,2] but no case has been reported in young children. They present in the early third trimester mimicking a complicated inguinal hernia and resolve soon after delivery. The lesion arises from the veins draining the round ligament and the inguinal canal and may result due to: progressive venous obstruction due to gravid uterus, progesterone-mediated smooth muscle relaxation, raised cardiac output during pregnancy causing increased venous return from the limbs and leading to engorgement of venous tributaries [3-6] thus in broad sense are part of pelvic congestion syndrome.

Congenital vascular malformations may be present in children as a part of certain syndromes like: Klippel-Trenaunay syndrome (capillary malforma-
tions (port-wine stains), soft-tissue or bony hypertrophy, and varicose veins or venous malformations without AV malformation or shunting [7], Parkes weber syndrome (venous malformations, cutaneous capillary malformations, and lymphatic malformations along with AV malformation) [7], Proteus syndrome (asymmetric overgrowth of skin, bones, muscles, fatty tissue, blood vessels and lymphatic channels) [8]. Our patient failed to fit into any of the overgrowth syndromes.

Lower limb venous abnormalities can occur in the superficial, deep and perforating vein systems. Popliteal and superficial femoral veins are most frequently involved. Venous malformation involving the round ligament vessels in children is extremely rare. Conservative treatment like compression therapy and long term follow up is advised in asymptomatic patients. In patients who are symptomatic, like in our case surgical excision of the painful mass is indicated after confirming patency of the deep vein system.

At follow up 2 years later, our patient was found to have varicosities of the right great saphenous venous system, confirmed with venous Doppler imaging, which had to be treated with stripping of the vein.

REFERENCES