

Isolated large vulvar varicose veins in a non-pregnant woman

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Abstract

Vulvar varicosities are often asymptomatic, and they may be associated with varicose veins of the lower extremity. Also, they may be a part of pelvic congestion syndrome and usually occur during pregnancy. We present a case of a huge isolated and disfiguring vulvar varicosities in a non-pregnant women managed successfully by combination of surgery and sclerotherapy.

Keywords

Vulvar varices, management, duplex ultrasound, internal iliac veins, ovarian veins, pelvic vein reflux, varicose veins

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Introduction

Vulvar varicosities result from venous obstruction, increased venous pressure, and venous insufficiency. They usually occur during pregnancy and typically regress spontaneously within 6 weeks postpartum. It is estimated that 4% of women have had vulvar varicosities (VV).^{1,2} They may be isolated or associated with varices of the lower extremity, and they may occur as part of pelvic congestion syndrome (PCS). When symptomatic women may complain of discomfort, swelling, or pressure in the vulva area especially with prolonged standing, at the end of the day, during or after intercourse (dyspareunia), or just before the onset of menses, however, they are often asymptomatic.^{1–3} In pregnant women, diagnosis by physical examination is possible as the varices are engorged and clinically visible. To plan the best therapeutic approach, investigations are needed to determine whether the varices are isolated or caused by other venous connections like pelvic or lower limb venous system. There is no consensus on indications for imaging. Many modalities have been used like duplex ultrasound (DU), magnetic resonance (MR) imaging or computed tomography (CT), and venography. Treatment depends on whether VV are present in isolation or associated with leg varicosities and/or PCS.^{4–6} In our case, the patient was young, non-pregnant; the varices were caused by severe reflux of the great saphenous vein (GSV) tributaries and clinically were huge and deforming the genitalia. Our management was successful in obliterating the cause of varices and providing comfort and cosmetic satisfaction.

Case report

A 31-year-old fit and well female referred to the vascular clinic with a swelling in the genital area for 3 years. The swelling was asymptomatic; however, lately, it increased in size and she started to have discomfort with prolonged standing. She is a mother of two boys, 5 and 7 years old, born with spontaneous vaginal delivery with no complications. She had no significant past medical or surgical history. The patient denied abdominal, pelvic, or lower limbs pain. She has normal menstruation; however, she stopped sexual activity in the last months due to the swelling. On examination in the supine position, she had a very prominent large caliber veins in the right vulva (Figure 1). She had no prominent veins around the pelvic area and the lower limbs. The varices were soft, non-tender with normal overlying skin. DU demonstrated a severe reflux in the saphenofemoral junction (SFJ) extending to a large 0.8-mm-diameter external pudendal vein (EPV) connecting to the varices plexus. However, the GSV below the junction with the EPV was competent and with normal diameter. MR venogram showed a normal sized ovarian and pelvic veins.

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Figure 1. Image showing the large vulval varices (white arrow) with the patient in supine position.

Option of embolization will only manage the cause of varices but will not diminish its size. The patient was mainly concerned about the swelling and wants it to be excised soon as she wants to get pregnant. Direct sclerotherapy with embolization will lead to thrombosis of the large varices, associated often with pain, as the thrombosis resolves with a high possibility of repeated sessions. The patient refused this option. We offered the patient surgical ligation of right SFJ and saphenous tributaries with excision of varices. During the procedure, the SFJ and saphenous tributaries were dissected. The EPV was large in diameter draining into a large segment of the GSV just proximal to the SFJ. The GSV below its junction with EPV was with normal diameter (Figures 2 and 3). The EPV was divided between 2 and 0 silk ties. Then, through a longitudinal incision in the right vulva, 2 cm lateral to its medial edge, the varices were either excised, avulsed, or ligated (Figure 4). Compression bandage was applied. On the fourth week of follow-up, wounds of vulva and groin were healed. The right vulva was slightly bigger from the left, and the patient was very satisfied. DU on the sixth week post-surgery showed small isolated remnants of varices in the vulva which were injected under ultrasound guidance with 1% polidocanol foam solution. Foam solution was made using Tessari method. The foam solution was made as follows: 1 mL of liquid sclerosant, 1% polidocanol (Aethoxysklerol), was drawn into a 5-mL syringe and 4 mL of air into the another 5-mL syringe; both syringes were connected to a medical three-way tap; then, the plungers of both syringes were moved back and forth for 20 times to produce sclerosing foam. The foam syringe was then connected to a 30G 12-mm-long needle.

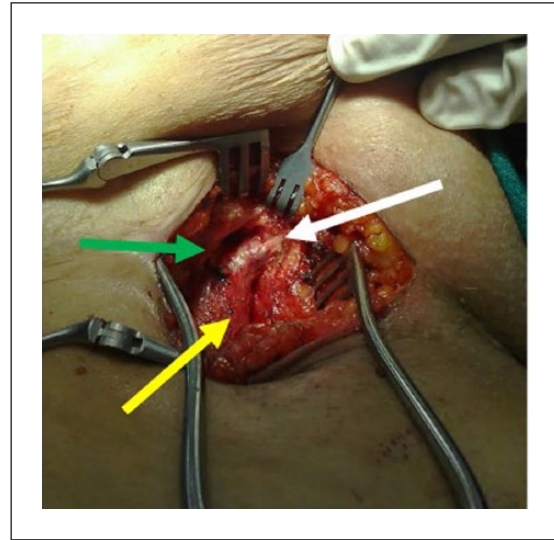


Figure 2. Intraoperative image showing the right saphenofemoral junction exposed (green arrow), normal diameter great saphenous vein (yellow arrow), and the large external pudendal vein (white arrow).

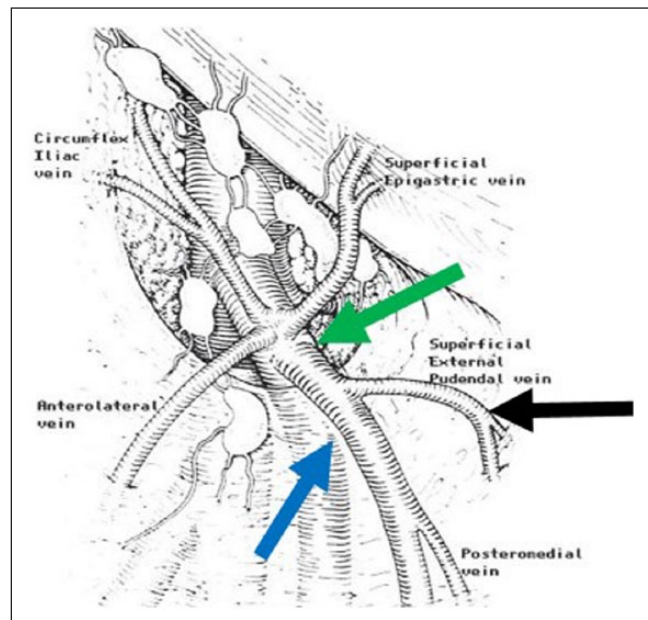


Figure 3. Diagram showing saphenofemoral junction (green arrow), great saphenous vein (blue arrow), and superficial external pudendal vein (black arrow). (Adapted from Caggiati et al.25).

Under DU guidance, the foam was injected to remaining vulval varices.

At 12 weeks follow-up, both vulva were similar in size, patient had no complaints, and she was 2 weeks pregnant. She was asked to visit the clinic during her last 2 months of pregnancy and she visited and admitted to have no complaints and normal-appearing vulva.

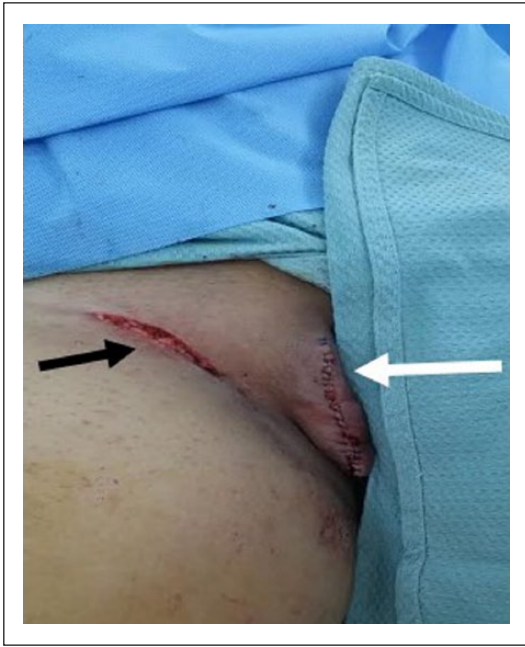


Figure 4. Showing the right groin incision before final closure (black arrow) and vulvar wound (white arrow).

Discussion

Although uncommon (present in 4% of woman), when present, VV are very annoying especially during pregnancy. Causes are not known. However, as lower limbs varicose veins, VV in non-pregnant women can be caused by local venous insufficiency and incompetence. Genetic factors are likely to play a role in predisposition to these venous changes. Commonly, varices appear during the last trimester of pregnancy as lower limbs veins enlarge due to compression of pelvic veins by the growing uterus. Most frequently, VV present with PCS. PCS is characterized by chronic pelvic discomfort exacerbated by prolonged standing and coitus in women who have periovarian varicosities on imaging studies.^{1-4,7} The etiology of PCS is unclear, and the optimum treatment is uncertain. VV are rare in non-pregnant women. When present, most women complain of pelvic discomfort especially with straining or prolonged standing. Women with VV are often asymptomatic. Symptomatic women may describe vulvar discomfort, swelling, and pressure that are exacerbated by prolonged standing, exercise, and coitus. In non-pregnant women, symptoms may be aggravated by menses and may represent a manifestation of PCS.⁸⁻¹¹

Our patient was a young female who could not get pregnant because of her huge VV which was disfiguring that her husband is repulsed by it and could not have sexual activity with her. Over the last year, she tried to get treated with no success. She was a very shy and religious woman refusing to be examined by a male physician. She was referred by many female gynecologists and general surgeons to vascular

surgery where females are not available in this specialty. So, she tried herbal and traditional medicine with no results. Her husband who wanted more children planned to get married again. That made her to decide to accept her gynecologist referral and seek treatment from vascular surgery clinic. Apart from the varices' size and location, she had no complaints. She denied having pain or discomfort in the pelvic area and lower limbs, with or without menses. Her gynecologist reported in her evaluation that the patient has no gynecological problem and is clear from infection. When clinically diagnosed, it is important to confirm the origin of venous reflux to plan therapy. Diagnostic modalities used in the investigation of this condition include DU of pelvic (transabdominal and transvaginal) and lower limbs venous system, CT, MR venography, and catheter-directed venography.¹

We started by the non-invasive ultrasound which showed incompetent right SFJ and EPV with severe reflux. The GSV below its junction with the EPV was competent and with normal diameter. The rest of examination was normal. With absence of PCS and DU findings, although rare, isolated varices were diagnosed. However, in view of our patient's cultural and social circumstances and the fact that DU has low sensitivity to detect pelvic veins, we needed to confirm the origin of reflux. MR venography was done which demonstrated normal-sized ovarian and pelvic veins and the communication of the VV to a large upper thigh vein (EPV).

There is no standard approach to treatment of VV, and the optimum treatment is not known. Therapy is individualized based on symptoms and reflux origin. Previously, management of PCS and VV was hysterectomy and/or ligation of the ovarian veins. It was replaced by laparoscopic ligation of the ovarian veins. However, due to their complication and high recurrence rate, they were replaced by the most commonly performed technique now, which is embolization of the varices using interventional radiology. This technique has clinical success of 70%–85% with minimal patient discomfort.¹²⁻¹⁵

We did consider this technique; however, selective embolization of the EPV will not eliminate the huge varices at least in short term, which is the main concern of the patient. DU-guided direct foam sclerotherapy was used successfully in the management of varices in combination with another modality like surgical or interventional radiology to eliminate ovarian veins reflux.¹⁶⁻¹⁸ To obliterate varices by sclerotherapy, multiple sessions over a period of time depending on the extent of varices will be needed. Also, thrombosis of varices by sclerotherapy causes pain and discomfort till thrombus resolution. Our patient's varices were large, protruding as a mass. With sclerotherapy, there will be a significant pain and discomfort in addition to a long period of resolution and unlikely cosmetic satisfaction. Local excision of VV and sclerotherapy have been reported to be sufficient in patients with varices.⁵

In order to achieve the patient satisfaction and manage her condition, we selected to perform surgical ligation of SFJ and all its tributaries with transection of the EPV and excision of varices and redundant skin. Supplemental sclerotherapy of small remaining varicosities achieved complete therapeutic and cosmetic satisfaction.

Conclusion

Management of VV should be individualized. As the vascular drainage of the female external genitalia does not have valves, they are susceptible to the development of varices and develop varicosities from incompetent GSV (drains the superficial and deep EPVs and posteromedial tributaries) or insufficiency of the internal iliac and ovarian veins. With ovarian and pelvic reflux, embolization offers high success and minimal complications. Patient satisfaction is achieved with surgical excision supplemented by sclerotherapy in patients with large disfiguring varices.

Declaration of conflicting interests

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Ethical approval

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Informed consent

Verbal informed consent was obtained from the patient(s) for their anonymized information to be published in this article.

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