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Saphena Varix Mimicking Femoral Hernia in a Rural Elderly Patient: A Diagnostic Challenge in Primary Care

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ABSTRACT: Saphena varix is an uncommon venous dilation at the saphenofemoral junction that may clinically resemble a femoral hernia, resulting in diagnostic difficulties, particularly in primary care environments. We present a case of an 80-year-old male farmer from a rural background who exhibited a persistent swelling in the right groin area. The swelling started slowly, went down when the person lay down, and was linked to several dilated veins in the right lower limb and dull, aching pain that got worse by the end of the day. Clinical examination revealed a soft, compressible swelling with a cough impulse and palpable thrill, along with prominent tortuous varicose veins. Color Doppler imaging showed that the saphenofemoral junction was widening and that blood was flowing back, which is what you would expect with saphena varix and varicose veins.The patient had high ligation and stripping of the great saphenous vein, and the results were good. There was no recurrence after 18 months. This case underscores the necessity of meticulous clinical evaluation and suitable imaging to distinguish saphena varix from femoral hernia, while also stressing the imperative to enhance diagnostic capabilities in rural healthcare environments.

INTRODUCTION

Saphena varix is an uncommon condition marked by localized dilation of the great saphenous vein at its confluence with the femoral vein. Because of where it is in the body, it often looks like a femoral hernia, which makes it hard to diagnose, especially in primary care settings[1]. A clinical examination usually shows a soft, compressible swelling with a cough impulse. It may also be linked to a palpable thrill and prominent tortuous varicose veins[2]. Color Doppler imaging is very important for diagnosis because it shows that the saphenofemoral junction is dilated and that there is venous reflux. This confirms saphena varix and related varicose veins[3].In rural healthcare settings, limited access to diagnostic tools and a lack of knowledge among primary care providers can lead to delayed diagnoses and poor management, which can raise the risk of complications like thrombophlebitis and deep vein thrombosis. So, early recognition and the right referral are important for the best care.

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CASE REPORT

An 80-year-old male farmer came to the outpatient department because he had been having swelling in his right groin area for the past six years. The swelling came on slowly and didn't get bigger. When the patient lay down, the pain got better, and they said they had a dull ache in their right lower limb that got worse at the end of the day. He also saw a lot of dilated veins on the right lower limb. The patient also had bilateral inguinal hernias and an umbilical hernia that could be reduced.

On clinical examination, a small 2 × 2 cm circular swelling was noted in the right femoral region. The swelling was soft, compressible, and reducible, with a palpable thrill on coughing. Dilated, tortuous veins were present along the medial aspect of the right thigh and anteromedial aspect of the right leg, which reduced on limb elevation. *(Figure 1, Figure 2)*

Colour Doppler ultrasonography of the femoral region demonstrated dilatation at the saphenofemoral junction with reflux, confirming the diagnosis of saphena varix. Venous Doppler imaging of the right lower limb revealed incompetence of the great saphenous vein with valvular reflux, consistent with primary varicose veins. The characteristic "Mickey Mouse sign" was also observed on ultrasound at the saphenofemoral junction. *(Figure 3, Figure 4)*

Ultrasonography of the abdominal wall confirmed bilateral inguinal hernias and a reducible umbilical hernia without evidence of strangulation or obstruction.

The patient underwent surgical management under spinal anesthesia. Intraoperatively, the saphena varix appeared as a dilated sac at the saphenofemoral junction with incompetent valves and retrograde flow. Excision of the saphena varix along with high ligation and stripping of the great saphenous vein was performed. *(Figure 5, Figure 6)*

The postoperative period was uneventful. The patient was advised compression therapy and limb elevation. Surgical repair of the inguinal and umbilical hernias was deferred due to patient preference and comorbid conditions. At four weeks follow-up, the patient showed significant improvement in symptoms, and at 18 months follow-up, there was no recurrence.

DISCUSSION

Saphena varix can mimic femoral hernia due to its anatomical location and clinical features such as reducibility and cough impulse[4]. Accurate diagnosis relies on careful clinical examination supported by Doppler imaging[3]. In rural healthcare settings, misdiagnosis is common due to limited diagnostic resources and lack of awareness among primary care providers. This can lead to delayed treatment and increased risk of complications.

In resource-limited rural settings, conventional surgical management remains a highly practical and effective treatment modality for saphena varix and associated varicose veins[5,6]. Study shows phlebectomy to be much better option than sclerotherapy for the treatment of varicose veins[7,8].Although minimally invasive techniques such as endovenous laser therapy (EVLT) have gained popularity, they require strict follow-up and access to specialized facilities, which may not be feasible for patients from rural backgrounds who often have limited access to healthcare and poor follow-up compliance[9].

In such scenarios, definitive surgical procedures like high ligation and stripping offer a one-time, cost-effective solution with reliable outcomes. Additionally, studies have shown that phlebectomy and surgical approaches are often more effective than sclerotherapy in the management of varicose veins, particularly in reducing recurrence and improving long-term outcomes.

A comparative study by Li et al. demonstrated that both endovenous laser treatment and conventional surgery have comparable efficacy in managing great saphenous vein varicosities, with no significant difference in recurrence when appropriately performed[10]. However, considering patient compliance, accessibility, and cost factors in rural healthcare setups, conventional surgery may provide a more dependable option.

In our case, the patient showed excellent clinical improvement, with no recurrence even after 1.5 years of follow-up, further supporting the durability and effectiveness of surgical management in such settings.

CONCLUSION

Saphena varix, though rare, should be considered as an important differential diagnosis in elderly patients presenting with groin swelling. Proper clinical examination combined with appropriate imaging such as Doppler ultrasound is essential for accurate diagnosis. Strengthening primary healthcare systems, improving diagnostic access, and ensuring timely referral can prevent complications and improve patient outcomes, particularly in rural settings.

Public Health Implication

This case highlights the need for training primary care physicians in vascular examination, improving access to Doppler ultrasound at peripheral healthcare centers, and strengthening referral systems in rural areas to ensure early diagnosis and appropriate management.

Key Learning Points

Saphena varix can clinically mimic femoral hernia and should always be considered in differential diagnosis of groin swelling. Doppler ultrasound is essential for accurate diagnosis. Early referral and intervention prevent complications. Rural healthcare systems require strengthening in diagnostic capacity.

Informed Consent

Written informed consent was obtained from the patient for publication of this case report.

Figures:

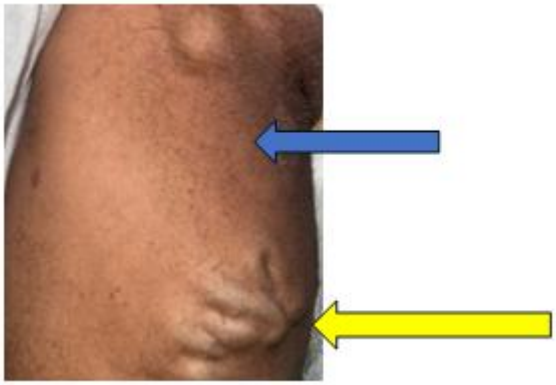


Figure 1 . small 2 x 2 cm circular swelling in the right femoral area, soft and reducible(blue arrow) with dilated and tortures veins(yellow arrow)



Figure 2 .dilated, tortures veins on the medial surface of the right thigh and anteromedially on the right leg

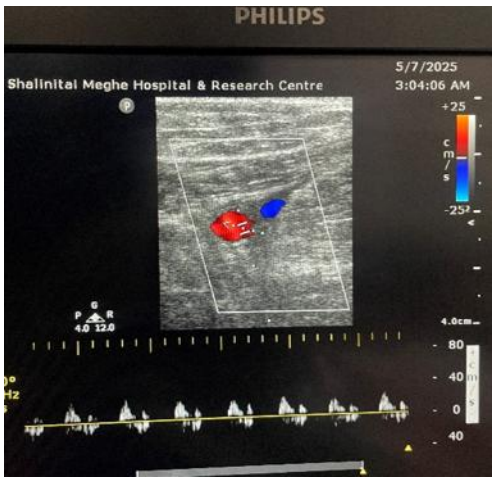


Figure 3 Colour Doppler image

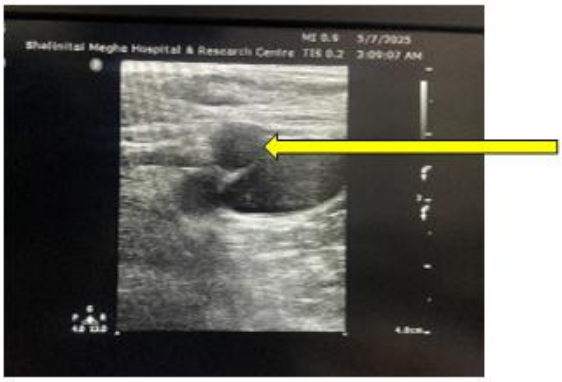


Figure 4: Sonographic image of Saphena Varix



Figure 5: intra operative finding- Saphena Varix



Figure 6: Stripping of great saphenous veins specimen

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