



Blue, Rope-like Lesion

Alexander K.C. Leung, MBBS, FRCPC, FRCP(UK&Irel), FRCPCH, FAAP, and Benjamin Barankin, MD, FRCPC

A 53-year-old male waiter presents with a five-year history of a blue, tortuous, rope-like lesion behind his left knee and along his left lateral leg. He experiences limb heaviness and ache after prolonged standing. The lesion is not pulsatile.

1. What is the diagnosis?

- Lymphangitis
- Arteriovenous fistula
- Varicose vein
- Lichen striatus

2. What are the treatment options?

- Lifestyle changes
- Endovenous therapy via radiofrequency or laser ablation
- Ultrasound-guided foam sclerotherapy
- Conventional open surgery
- All of the above

A varicose vein is a dilated superficial vein, usually in the legs, with a varix that measures at least 3 mm in diameter. The condition becomes more obvious with prolonged standing and less obvious when the legs are elevated. It is estimated that approximately 23% of adults in the United States have varicose veins.¹ The most common cause is valvular incompetency of the great saphenous vein and, to a lesser extent, the small saphenous vein, which produces venous reflux. Other causes include venous hypertension, loss of elastic tissue in the venous wall,



and calf muscle pump dysfunction. Risk factors include older age, female sex, pregnancy, prolonged standing, obesity, cigarette smoking, tall stature, chronic constipation, genetic predisposition, and deep vein thrombosis.

The condition is often asymptomatic. However, some patients may experience limb pain, aching, heaviness, fatigue, and ankle swelling after prolonged standing.

The condition is cosmetically unsightly and may impact quality of life and clothing choices. Other complications that may occur with more advanced disease include hyperpigmentation, dermatitis, lipodermatosclerosis, atrophie blanche, superficial thrombophlebitis, hemorrhage, and venous ulceration.

Venous duplex ultrasound is useful for documenting the diameter of the affected vein, the location and relationships of the

sapheno-popliteal junction, and the extent of truncal reflux (backflow of blood through a main superficial vein).

The natural history is slowly progressive. Treatment should be individualized, taking into consideration the size and location of the varicose vein, presence and severity of symptoms and complications, impact on quality of life, response to previous treatment, the patient's preference and budget, and the physician's preference and experience. Treatment options include lifestyle changes (*e.g.*, weight reduction, regular physical activity, avoidance of prolonged standing), compression stockings, endovenous therapy with either radiofrequency or laser ablation, sclerotherapy,

and conventional open surgery (*i.e.*, microincision phlebectomy for small varicose veins and surgical stripping and vein ligation for large varicose veins). Most patients will require a combination of these treatments to achieve the best result. 

Reference

1. Hamdan A: Management of Varicose Veins and Venous Insufficiency. *JAMA* 2012; 308(24):2612–2621.

Answers: 1-c; 2-e

Dr. Alexander K.C. Leung is a Clinical Professor of Pediatrics at the University of Calgary in Calgary, Alberta.

Dr. Benjamin Barankin is a Dermatologist and Medical Director of the Toronto Dermatology Centre in Toronto, Ontario.