Neurofibromas of saphenous nerve mimicking thrombophlebitis

Pinjala R. K.

Received: 7 October 2009 / Accepted: 21 November 2009
© Association of Surgeons of India 2010

Abstract Young man aged 25 years complained of persistent pain on the medial side of the lower part of the thigh for 2 months. A cord like structure was palpable with 3 small nodular swelling parallel to the course of the long saphenous vein. Initially he was treated as a case of thrombophlebitis of saphenous vein in a clinic near his home. When the pain persisted after receiving injection heparin therapy, he was referred to the vascular surgery clinic. Duplex scan reported as thrombophlebitis of a vein parallel to the great saphenous vein. We continued the injection heparin and suspected thrombophilia. There were no other known risk factors for thrombosis. The pain persisted, so we excised the cord like structure with nodular swellings and biopsy reported it as neurofibromatosis of the saphenous nerve. Postoperatively the pain subsided dramatically and in the follow up clinic he mentioned about the paresthesias in the distribution area of saphenous nerve. Diagnosis of the small tumors of the peripheral nerves is difficult at this site and they can be easily mistaken for thrombophlebitis. Unusual pain and nodularity of the swelling as in this case can help us to consider early biopsy or excision of the tumor.

Keywords Neurofibroma · Thrombophlebitis · Saphenous nerve · Duplex scan · Schwannoma

Case report

Small tumors of the peripheral nerves are often difficult to diagnose and there can be delay in their diagnosis. Peripheral nerve tumors can be easily mistaken for the other pathologies such as thrombophlebitis [1]. Tumors can occur in the superficial and deep nerves. Neurofibromatosis are a diverse group of genetic conditions that share of predisposition to development of tumors of nerve sheath. Cord like structure with nodular swellings in the lower part of the thigh can be easily mistaken for thrombophlebitis [2]. Here we are reporting a case of neurofibroma of the saphenous nerve mimicking thrombophlebitis with severe pain which was relieved after excision.

Young man aged 25 years was admitted with history of severe pain on medial side of the lower part of the thigh for last 2 months. A cord like structure was palpable for a length of 10 cm parallel to the saphenous vein. There were three nodular swellings over this cord. These nodules were very tender to touch and painful. Initially he was treated in a clinic near his home with suspicion of thrombophlebitis (Fig 1). He received injection heparin and as there was no relief of pain he was referred to vascular surgery clinic. Duplex scan was reported as thrombophlebitis of the vein parallel to the saphenous vein in the lower part of thigh. All the other investigations were within normal limits. There were risk factors suggestive of thrombophilia. We considered excisional biopsy of the segment looking like thrombophlebitis as there was unusual pain, tenderness and it was resistant to a course of injection heparin therapy. In the biopsy report it was confirmed as neurofibroma of the saphenous nerve (Fig 2). Postoperatively the pain subsided dramatically. He was walking freely without pain and limping. In the follow up 2 months after surgery he complained of paresthesias (mild) in the distribution area of saphenous nerve.

Pinjala R. K.
Department of Vascular Surgery,
Nizam's Institute of Medical Sciences,
Panjagutta, Hyderabad,
Andhra Pradesh, India

Pinjala R. K. (✉)
E-mail: pinjala@hotmail.com

Fig. A Course of the saphenous nerve on the medial side of lower 1/3rd of thigh

Fig. B Neurofibroma in the saphenous nerve on the medial side of lower 1/3rd of thigh

Figs. Histopathological examination of tumor – Neurofibroma (1–6)

1. Low power view showing the lesion
2. High power view showing the spindle shaped cells with abundant amount of cytoplasm and hyper chromatic nucleus
3. High power view showing hypo cellular areas with spindly shaped cells in matrix
4. High power view with spindle shaped cells with buckling of the nucleus
5. High power view with showing hyalinization
6. High power view with showing hyalinization

Discussion

Multiple small tumors (Neurofibromas) arising from the saphenous nerve (subcutaneous part) on the medial side of the lower part of the thigh can be easily mistaken as thrombophlebitis in the initial examination [3]. Severe pain, no response to the anticoagulation minimal induration and firm to hard consistency of tumor prompted us to think about pathologies even though the duplex scan reported it as thrombophlebitis. Magnetic resonance imaging is useful demonstrate the nerve tumors. Our patient did not show tumors at other sites in the body. Sensory nerve roots are more often affected by these tumors. Surgical treatment for the nerve sheath tumors such as schwannoma or neurofibroma is primarily reserved for the symptomatic tumors. Electromyographic monitoring and operating microscope care useful in saving the nerves at the time of surgical excision. Genetic counseling is needed in some patients when the neurofibroma is part of the Neurofibromatosis type 1, Neurofibromatosis types 2 types of syndromes [4]. Recurrence after excision of the isolated tumors like in this is unusual. Many societies are looking at the possibility of developing the consensus and guidelines for the counseling and management of patients with neurofibromatosis [5]. Bilateral vestibular schwannomas may be present in few

patients. Routine screening of all the asymptomatic patients for tumors with the whole body MRI scanning may not be cost beneficial such as in our patient. We advised this patient to attend our neurology/ neurosurgery follow up clinic at regular intervals to screen for any recurrence or new lesions.

References

1. Mac Collin, Woodfin W, Kronn D, Short MP (1996) Schwannomatosis: A clinical and pathologic study. *Neurology* 46:1072–1079
2. Gazzeri R, Refice GM, Galarza M, Neroni M, Esposito S, Gazzeri G (2007) Knee pain in saphenous nerve schwannomas. *Neurosurg Focus* 22(6):E11
3. Edward JC, Green T, Riefel E (1989) Neurilemoma of the saphenous nerve presenting as pain in the knee. A case report. *J Bone Joint Surg Am* 71:1410–1411
4. Kim D, Murovic JA, Tiel RL, Moes G, Kline D (2005) A series of 397 peripheral neural sheath tumors: A 30 year experience at Louisiana state university health sciences centre. *J Neuro Surg* 102:246–255
5. Mac Collin M, Chiocca EA, Evans DG, Friedman JM, Horvitz R, et al. (2005) Diagnostic criteria for schwannomatosis. *Neurology* 64:1838–1845