

# Intraneural Lipoma Associated With a Branch of the Superficial Peroneal Nerve

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*Intraneural lipoma is a hamartoma that may involve various nerves, although its association with the superficial peroneal nerve is extremely rare. In this article, we describe the case of a young female with an intraneural lipoma localized to the superficial peroneal nerve. Also highlighted is the importance of meticulous clinical examination in order to accurately diagnose the entity so as to avoid expensive diagnostic imaging investigations. Level of Clinical Evidence: 4 (The Journal of Foot & Ankle Surgery 47(6):576–578, 2008)*

**Key Words:** fibrolipoma, hamartoma, intraneural lipoma, superficial peroneal nerve, Tinel's sign

**I**ntraneural lipoma is a hamartoma comprised of hypertrophied fibrofatty tissue mixed with neural tissue. Usually, these lesions involve the upper limb. Very rarely, they are associated with nerves around the foot and ankle. A high index of suspicion after diligent clinical examination can lead to diagnosis of the entity without the requirement of specialized diagnostic imaging or other investigative modalities. We present such a patient with an intraneural lipoma localized to the superficial peroneal nerve. The lesion was accurately diagnosed clinically, after which it was treated satisfactorily by means of excision of the mass.

## Case Report

A 21-year-old female, a business graduate by profession, complained of a painless, progressive swelling localized over the anterolateral aspect of the dorsum of the right foot, ankle, and lower fourth of the leg. It had progressed from an original size of 5 × 3 cm over the preceding 6 months, to a

size of 13 × 5 cm at the time of presentation. There was no sudden increase in size, history of local trauma, or a local infectious focus associated with the lesion. Upon examination, a soft, nontender, pseudofluctuant, lipomatous lump was evident; and it was mobile from medial-to-lateral, but not from distal-to-proximal. It did not seem to be attached to the overlying skin or the underlying tendons, and it was noncompressible and nonpulsatile (Figure 1). Proximally, it appeared to be in continuity with the superficial peroneal nerve, and as it propagated distally, it once again diminished to a longitudinal cordlike structure, suggestive of nerve. There was no overtly associated sensorimotor deficit, Tinel's sign, or distal limb hypertrophy. There was also no distal vascular deficit or associated inguinal lymphadenopathy. Movements at the ankle and foot joints were normal. Laboratory data were normal. Based solely on the history and the detailed clinical examination of the lesion, a working diagnosis of soft tissue tumor within a distal branch, likely the lateral branch, of the superficial peroneal nerve was made. Although consideration was given to obtaining additional diagnostic studies, namely magnetic resonance imaging (MRI) and nerve conduction velocity (NCV) testing, it was felt that the clinical diagnosis alone warranted surgical inspection of the lesion, with appropriate biopsy and/or excision of the lesion. In this particular case, the indication for surgical intervention was primarily cosmetic, with additional concerns being those for confirmation of the clinical examination and ascertainment of an accurate pathological diagnosis.

Using a curvilinear, primarily longitudinal incision, and tourniquet control of hemostasis, a lipomatous tumor was seen to be arising within the lateral branch (the intermediate dorsal cutaneous nerve) of the superficial peroneal nerve (Figures 2 and 3). Gross inspection revealed the lesion to be in continuity with the nerve trunk at the proximal and distal

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