Ganglion: An uncommon cause of compressive peroneal neuropathy

Sir,

Peroneal nerve injury usually results from fracture of the fibula neck or direct pressure from an ill-fitting plaster cast.[1] Ganglionic cysts developing in the sheath of the peroneal nerve or joint capsule around the knee is a rare cause of compressive peroneal neuropathy.[1-3]

We report a rare case of compression of peroneal nerve by ganglion and discuss the clinical and radiological features. A 40-year-old female presented with slowly progressive swelling in the upper lateral aspect of the left leg since one year. It was associated with progressive weakness of the left great toe with loss of sensation over it. There was no history of trauma or any other swellings. Her general and systemic examination was unremarkable. Neurologically she had weakness of left EHL (Extensor hallucis longus) of Grade 3/5 with loss of sensation in S1 dermatome. Local examination revealed a 10X3cm in size, ill-defined, firm, non-tender, non-pulsatile, immobile swelling on the lateral aspect of the upper part of the left leg [Figure 1]. The skin over it was free and healthy. Blood investigations were normal. The MRI of the left leg and knee showed hypointense lesion on T1W images, extending from the proximal tibiofibular joint region and displacing...
the muscles medially. The lesion was becoming hyperintense on T2W and remaining hyperintense on fat suppression images [Figure 2]. During surgery the peroneal nerve was stretched over the swelling but could be defined normally both proximally and distally. Nerve fibers were separated from the capsule and lesion could be excised totally. It had a thin-walled capsule containing yellowish jelly-like material inside [Figure 3]. Histopathology showed thin fibrous capsule and there were no foci of inflammation. Following surgical excision of the ganglion, there was significant symptomatic improvement as the pain was completely relieved and three months after surgery the motor weakness of EHL improved to Grade 4+/5. Clinically, patients with compressive peroneal neuropathy due to ganglion usually present with gradual onset of pain, paresthesia suggestive of nerve root compression, focal weakness (a syndrome mimicking central nerve root compression) and if the lesion is large enough a mass can be palpated.[4] Though ultrasonography and CT scan will show the cystic nature of the lesion MRI will provide better delineation and extent of the lesion.[2,4-6] An MRI will help to define the extra-articular soft tissue location of the cyst and also to differentiate ganglion cysts from other cystic lesions in and around the knee.[2,5,6] The differential diagnoses of these lesions involve L5 root pathology, a posttraumatic intraneural hemorrhage, a nerve compression near the tendinous arch located at the fibular insertion of the peroneal longus muscle and a nerve-sheath tumor.[2] Microsurgical exploration and excision remains the traditional surgical treatment.[2,3,7] However, it should be kept in mind that despite surgical treatment the neurological symptoms may not recover.[7] Our patient significantly improved after surgery as her pain was completely relieved and there was significant improvement in the motor power. Regular follow-up is necessary as these cysts can recur after simple excision. Repeat resection after a recurrence is often not effective and arthrodesis of proximal tibiofibular joint is a more effective surgical option after a recurrence.[3] Chances of recurrence can be reduced by ligation or electrocoagulation of the pedicle stalk and/or recurrent articular branch of the peroneal nerve at the time of surgery. The present case signifies the importance of MRI in these patients and also that decompression of nerve will result in functional recovery.

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References


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