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Occult isolated articular branch cyst of the lateral plantar nerve

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Introduction: Intraneural ganglion cysts (IGCs) are mucinous cysts found within peripheral nerves. The most common site of occurrence is the peroneal nerve. IGCs can cause neuropathic pain and motor and sensory deficits. IGCs have obvious macroscopic features on imaging (magnetic resonance imaging - MRI or ultrasonography) and during surgery; however, it is not uncommon, owing to limitations in imaging facilities, or radiologist or surgeon experience with this rare condition, for IGCs to be confused with extraneural ganglion cysts. Failure to identify the joint–ganglion connection can be associated with a high rate of recurrence.

Report: During the course of a recent routine tarsal tunnel decompression in a 46-year-old female patient with fluctuating plantar foot symptoms, we made the incidental discovery of a tiny amount of cyst fluid in an articular branch to the subtalar joint; no cystic expansion of any parent nerves in the ankle was present. Retrospectively, we could confirm the cyst and its joint connection from the MRI studies. We present this case as the first example of an IGC localized to an articular branch.

Conclusions: We have presented a novel example of cyst fluid localized to the articular branch of the lateral plantar nerve. It is unknown whether the occult cyst represented an ultra-early phase of a cyst that had not yet formed or the remnant of one that had been larger and involved the parent nerve before being nearly completely resorbed. In either case, this isolated articular branch involvement is the conduit for IGC progression and can easily be overlooked.

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