Gouty stones in the spinal canal

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A 41-year-old man sought treatment at the orthopedics clinic. He had experienced back pain for 20 days, with persistent pain radiating to the left buttock. He reported experiencing gout for one year and then underwent surgery for the removal of gouty stones on the right index finger, the dorsum and first metatarsophalangeal joint of the right foot, left knee, and left ankle one year before. After the surgery, the patient received regular oral treatment of 40 mg qd of febuxostat, with satisfactory uric acid control recently. In addition, the patient had suffered from hypertension for approximately one year. Examination by an orthopedic specialist did not identify any specific positive signs, except for the slightly decreased muscle strength of left lower limb (grade V-). Computed tomography of the lumbar spine showed multiple lesions in the left appendage of the L3 vertebra, with osteogenic swelling and involvement of the spinal canal (Figure 1A and 1B). Lumbar magnetic resonance imaging also revealed abnormal signals around the left appendage of L3 and in the spinal canal (Figure 1C), involving the spinal canal and left erector spinae muscle. Bone scanning indicated that this represented an abnormality at the left edge of the L3 vertebral body, suggesting a possible benign lesion. In view of the patient’s medical history, it was considered that gouty stones in the spinal canal may have caused spinal cord compression. Thus, we performed complete posterior resection of the lesions at the L3 appendage and the partial vertebral lesion (Figure 1D), together with spinal canal decompression, internal fixation of an L2-L4 pedicle screw, and bone graft fusion.
The patient’s postoperative recovery was uneventful, and subsequent pathological results confirmed the diagnosis of gouty stones in the spinal canal.

Tophaceous gout is a severe form of gout that results in the formation of large nodules or tophi.\textsuperscript{1} While the disease commonly affects the joints of the hands and feet, it can also involve the spinal region, leading to spinal cord compression and potential neurological symptoms.\textsuperscript{2,3} Patients with gouty stones in the spinal canal may experience back or radicular back pain, or even suffer from incomplete paralysis during the course of the disease.\textsuperscript{4,5} Although the presence of gouty stones in the spinal canal is rare, clinicians need to be aware of this phenomenon and take the opportunity to treat patients appropriately and avoid surgical delay.

References


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Figure 1. (A and B) Computed tomography of lumbar spine showing multiple lesions around the left appendage of the L3 vertebra, with involvement of the spinal canal; (C) Magnetic resonance imaging revealing abnormal signals in the area of the left appendage of L3 and in the spinal canal; (D) Gout stones completely removed during the operation.

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