Case Report

Surgical Excision of Medial and Lateral Osteochondromas of the Proximal Fibula in a Seven-Year-Old Boy with Preservation of the Common Peroneal Nerve: A Case Report

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Abstract

Background: Proximal fibular osteochondromas present a distinct operative challenge because the common peroneal nerve passes close to the fibular neck. Lesions arising from different surfaces of the proximal fibula may require separate exposures to obtain adequate access without injuring adjacent structures. **Case presentation:** A seven-year-old boy was treated for radiologically and operatively diagnosed osteochondromatous outgrowths involving the medial and lateral aspects of the left proximal fibula. Preoperative radiographs demonstrated a prominent exophytic ossified lesion near the fibular head. On 31 October 2026, the patient underwent excision through separate medial and lateral longitudinal incisions under spinal anaesthesia. The medial exposure was performed with preservation of the gastrocnemius tendon; the lateral lesion was removed with deliberate protection of the common peroneal nerve. Both excised specimens were submitted for histopathological examination. The immediate postoperative record documented a stable condition and satisfactory foot movement on assessment of peroneal nerve function. A left lower-leg radiographic examination dated 2 November 2026 is available; the duration of subsequent follow-up, formal neurological measurements, and histopathological findings have not been provided. **Conclusion:** This case illustrates a two-approach operative strategy for osteochondromatous lesions on opposing surfaces of the proximal fibula, with explicit attention to nerve preservation. The documented early recovery is reassuring, although definitive histological confirmation and longer-term evaluation are necessary before conclusions about recurrence or sustained function can be drawn.

Keywords: Osteochondroma, proximal fibula, common peroneal nerve, paediatric orthopaedics, surgical excision, case report.

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Introduction

Osteochondroma is a cartilage-capped osseous projection characterised by continuity of the cortical and medullary bone with the parent skeleton. It is the most common benign bone tumour and is usually identified during childhood or adolescence. Although many lesions remain asymptomatic, a prominent osteochondroma may produce pain, local swelling, mechanical limitation, deformity, or compression of adjacent neurovascular structures. Surgical treatment is generally reserved for symptomatic lesions and selected complications rather than being routinely undertaken for all radiographic findings.[1]

Osteochondromas arising from the proximal fibula are clinically important because the common peroneal nerve curves around the fibular neck and is vulnerable to traction, compression, or iatrogenic injury during tumour exposure. In a paediatric surgical series of 25 patients with 31 affected extremities, Birch and colleagues documented both preoperative peroneal dysfunction and new postoperative deficits, underlining the need for a careful neurological examination and surgical dissection.[2] Surgical strategies that preserve the fibular head, proximal tibiofibular articulation, and lateral knee stabilisers may reduce operative morbidity in suitable benign lesions.[3]

The present report describes a seven-year-old boy who underwent excision of osteochondromatous lesions on the medial and lateral surfaces of the left proximal fibula through two approaches. The main clinical interest lies in the operative anatomy, planned protection of the common peroneal nerve, and the distinction between documented immediate postoperative function and outcomes that still require longer follow-up.

Case Presentation

Patient information and clinical assessment: The patient was a seven-year-old boy managed in the orthopaedic service of a tertiary hospital in Prayagraj, Uttar Pradesh, India. The

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operative record identifies the left proximal fibula as the affected site and gives the working diagnosis as osteochondroma. Available lower-limb photographs show the knees, legs and feet from different positions. The supplied videos also show active lower-limb movement and walking. However, the records do not specify the duration of the mass, presenting pain, previous treatment, progression, functional restriction, family history, history of trauma, or a formal preoperative neuromuscular examination. These variables should be retrieved from the original case sheet before submission.

Diagnostic assessment: The available pre-excision frontal and lateral lower-leg radiographs show a prominent exophytic, expansile osseous projection arising close to the proximal left fibula, with an appearance compatible with the stated clinical diagnosis of osteochondroma[Figure 1]. The operative note describes osteochondromatous lesions on both the medial and lateral aspects of the proximal fibula, including a cartilage cap and bony stalk in the medial exposure. The precise number of discrete radiographic lesions, the sizes of each tumour, their relation to the physis and proximal tibiofibular joint, and their relation to surrounding nerves cannot be established reliably from the photographs alone.

The provisional differential diagnosis of a surface bone lesion includes alternative exostotic or juxtacortical lesions. The continuity between an osteochondroma and the cortex and medullary cavity of the parent bone is diagnostically useful.[1] No preoperative magnetic resonance imaging, computed tomography, neurophysiological study, or biopsy report is available in the supplied material. Because two outgrowths were described at a single bone, a history and examination for additional skeletal lesions and relevant family history would be helpful; hereditary multiple osteochondromas cannot be diagnosed from the provided evidence.

Timeline

Date / period	Documented event
Before 31 October 2026 (exact date unknown)	Preoperative clinical photographs and radiographs available; left proximal fibular exostotic lesion documented.
31 October 2026	Excision of medial and lateral proximal fibular osteochondromatous lesions via separate exposures; specimens sent for histopathology.
Immediately after surgery	Patient transferred to recovery in stable condition; foot movement assessed as satisfactory.
2 November 2026	Dated frontal and lateral left lower-leg radiographs available (Figure 2).
Perioperative interval not established	Videos show active lower-limb movement and walking, but their examination date and formal clinical scores are not documented.

Therapeutic Intervention: On 31 October 2026, surgical excision was performed under spinal anaesthesia with the patient supine. After preparation and sterile draping, a tourniquet was applied and subsequently inflated following exsanguination. A longitudinal incision, recorded as approximately 5–7 cm, was made over the medial aspect of the proximal fibula. Subcutaneous dissection was conducted carefully, preserving the gastrocnemius tendon. The osteochondromatous mass was exposed; the operative record notes a cartilage cap and a bony stalk measuring approximately 3–5 cm, although specimen measurements were not independently documented. Circumferential dissection was undertaken and the lesion excised using an osteotome while avoiding nearby neurovascular structures. The remaining bony base was flattened and smoothed using a rasp.

A second longitudinal incision was then made over the lateral aspect of the proximal fibula. The second osteochondromatous outgrowth was identified and similarly excised, with explicit attention to protecting the common peroneal nerve during the lateral approach. Both operative fields were irrigated with normal saline, and haemostasis was obtained. The operative note documents local infiltration of triamcinolone at the excision sites; its indication, concentration and dose are not specified. The wounds were closed in layers and covered with sterile dressings. The excised specimens were sent for histopathological examination, but the results were not included among the supplied records.

The original operative documentation does not report the duration of surgery, estimated blood loss, use of intraoperative nerve monitoring, exact nerve identification or mobilisation technique, status of the fibular head and lateral collateral ligament attachments, or intraoperative complications. These details should not be assumed.

Postoperative Course and Outcomes: The immediate postoperative order sheet records that the child was shifted to the recovery area in stable condition. Function of the common peroneal nerve was checked by observing foot movement and was described as satisfactory. The postoperative plan included monitoring of vital signs, distal pulses, limb perfusion and neurological status, limb elevation, and intravenous antibiotics and analgesics as prescribed. No immediate loss of foot movement was documented.

A left lower-leg radiographic study dated 2 November 2026 depicts the proximal fibular region after the documented procedure [Figure 2]. The images show postoperative change in the contour of the proximal fibula; without an independent formal radiology report and histopathological findings, radiographic clearance of both lesions should not be asserted. The supplied videos show the child walking without an obvious assistive device and performing active leg movements. Because their dates and examination conditions are unknown, these observations are descriptive only and do not establish a specific postoperative outcome or duration of recovery.

The available information does not include quantified ankle dorsiflexion or eversion strength, sensory mapping over the dorsum of the foot, wound assessment at a stated interval, pain scores, weight-bearing instructions, discharge date, recurrence surveillance, or long-term function. No definitive statement

about complete neurological recovery, recurrence-free survival, or absence of late complications can therefore be made.



Figure 1: Supplied undated pre-excision radiographs of the left proximal leg, showing a prominent exophytic osseous outgrowth in the proximal fibular region. The image appearance is compatible with the recorded diagnosis of osteochondroma; exact lesion measurements and anatomy require review of the original radiographic study.



Figure 2: Frontal and lateral radiographs of the left lower leg labelled 2 November 2026, following the operation documented on 31 October 2026. The source identifier strip has been removed for confidentiality. Postoperative contour changes are visible at the proximal fibula; radiographic completeness of excision cannot be confirmed from the supplied image alone.



Figure 3: Cropped lower-limb clinical photograph from the supplied material. The precise acquisition date relative to surgery was not supplied; therefore this figure documents appearance only and should not be interpreted as a measured treatment outcome.

Discussion

This case demonstrates an operative approach to osteochondromatous growths arising on opposing surfaces of the left proximal fibula in a child. The importance of the location is anatomical rather than oncological: the common peroneal nerve is superficial at the fibular neck, while the proximal tibiofibular joint and lateral knee stabilising structures occupy the adjacent region. Consequently, achieving lesion access and adequate excision must be balanced against preservation of neurological and mechanical function.[2–4]

Birch et al. reported a series of 25 paediatric patients undergoing excision of proximal fibular osteochondromas. Nine of 31 affected extremities had preoperative foot drop and five of 22 extremities without preoperative foot drop developed immediate postoperative foot drop, a reminder that surgery itself carries a nerve-injury risk.[2]Thacker et al. additionally examined the use of neuromonitoring during proximal fibular osteochondroma excision.[4] The present record does not indicate whether intraoperative neuromonitoring was available; it instead specifically documents protection of the common peroneal nerve during lateral dissection and a satisfactory early assessment of foot movement. These observations support the feasibility of the approach in this individual operation but cannot demonstrate that neurological risk was eliminated.

The potential complexity of the common peroneal nerve–osteochondroma relationship is emphasised by Gray et al., who described two osteochondromas traversing and splitting the nerve, highlighting the importance of clear exposure before lesion removal.[5] In a more recent paediatric case, Leveille et al. reported peroneal nerve palsy caused by a fibular osteochondroma with improvement after nerve decompression and tumour treatment.[6] A 2026 case series also documents recovery after excision and decompression in patients presenting with peroneal neuropathy.[7] Unlike those reports, the present uploaded records do not establish that the child experienced a preoperative palsy, so this case should be positioned as nerve-conscious excision, not as treatment of confirmed foot drop.

A further decision concerns the amount of bone and adjacent soft tissue removed. Mootha et al. described a technique for symptomatic proximal fibular osteochondromas preserving the fibular head and proximal tibiofibular joint, with attention to lateral knee stability.[3]In the present operative note, a medial

bony base was smoothed after osteotome excision and a second lesion removed laterally; however, the report does not explicitly describe the status of the fibular head, joint capsule, lateral collateral ligament, or biceps femoris insertion after surgery. Their preservation should be verified from the surgeon or detailed operation record before being claimed.

The presence of an apparently typical bony outgrowth on radiographs, together with intraoperative recognition of a cartilage cap and stalk, strongly supports an osteochondromatouslesion.[1] Nevertheless, histopathological analysis is important when a specimen has been submitted, especially to document the pathological diagnosis and exclude unexpected features. The absence of the histopathology report is therefore a principal limitation of this manuscript. Furthermore, as paediatricosteochondromas can grow before skeletal maturity, structured follow-up should focus on local recurrence, pain, knee stability, deformity, distal neurological function and any additional skeletal lesions.[1,3]

The case-report interpretation is limited by incomplete history, unknown duration of presenting symptoms, unavailable objective preoperative and follow-up neurological assessments, absent histopathology, and lack of a precisely dated postoperative clinical outcome. The available evidence supports successful completion of documented excision and satisfactory foot movement in immediate recovery, but nothing more definite. This distinction is consistent with the emphasis on transparent outcome and follow-up reporting in CARE guidance.[8]

Conclusion

A seven-year-old boy underwent separate medial and lateral excisions of osteochondromatous outgrowths involving the left proximal fibula, with careful attention to the common peroneal nerve during lateral exposure. The immediate postoperative record describes stable recovery and satisfactory foot movement. This case emphasises the value of anatomy-guided dissection around the fibular neck. Histopathological confirmation, formal neurological assessment and longer-term follow-up are needed to establish definitive diagnosis and durable functional outcome.

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Conflicts of interest

There are no conflicts of interest.

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