

## Solitary Osteochondroma Distal Tibia causing Synostosis with Adjacent Fibula: A Rare Case Report

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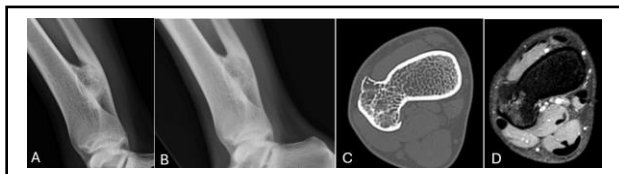
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### INTRODUCTION:

Osteochondroma is a benign bony outgrowth that typically arises in the distal femur or proximal tibia. The presence of synostoses with adjacent bone or between two separate osteochondromata is rare (1). We report a case of an enlarging distal tibia osteochondroma causing tibiofibular synostosis.

### REPORT:

A 31-year-old gentleman presented with right ankle discomfort for years, associated with a painless mass on the posterolateral distal right leg. He denied trauma. Examination revealed a non-tender mass over the posterolateral aspect of the distal right leg. An initial radiograph showed a broad-based bony outgrowth from the distal tibia causing a mass effect on the neighbouring fibula. He was initially treated non-operatively. Follow-up imaging revealed tibiofibular synostosis, confirmed by CT scan. As the mass enlarged, MRI scan revealed a hyperintense signal on the T2w/STIR sequence and post-contrast enhancement within the osteochondroma medullary, suspicious of malignant transformation. The cartilaginous cap was not apparent. He underwent excision with a margin extending to the fibula near the syndesmotomic joint. A cortical screw was secured to maintain the joint stability. Final histology confirmed osteochondroma without evidence of malignancy.



**Fig.1:**(A) Initial (B)Follow-up (C)CT scan (D)MRI with signal changes



**Fig.2:**(E) After Excision (F) Resected Specimen (G) Syndesmotomic screw

### CONCLUSION:

Osteochondroma complications may involve nerve irritation, growth plate disruption, bursitis, cortical erosion (2). In our case, the mass effect results in chronic irritation to the adjacent fibula, leading to cortical erosion and eventual synostosis. The excision of distal tibia osteochondroma is challenging due to its proximity to syndesmosis. The tibiofibular synostosis leads to dysfunctional syndesmotomic joint. Early detection of potential synostosis is crucial and enlarging osteochondroma in skeletally mature may indicate malignant transformation, necessitating surgical excision with adequate margin.

### REFERENCES:

1. Bessler, W., et al. (1997). Kissing osteochondromata leading to synostoses. *Eur Radiol*, 7, 480-485.
2. Davis, D. L., & Mulligan, M. E. (2015). Osteochondroma-related pressure erosions in bony rings below the waist. *Open Orthop J*, 9, 520..