

Fig. E-1

Case 1. Preoperative lateral radiograph (**E-1A**) of the distal part of the right femur and corresponding axial CT image (**Fig. E-1B**) demonstrating severe heterotopic bone. The path of the entrapped sciatic nerve is seen best on the lateral radiograph (arrow) as a tubular path through the heterotopic bone. On the axial CT scan, the heterotopic bone appears to be encircling the nerve (arrow).



Fig. E-2

Case 2. Preoperative anteroposterior radiograph of the distal part of the left femur demonstrating severe heterotopic bone.

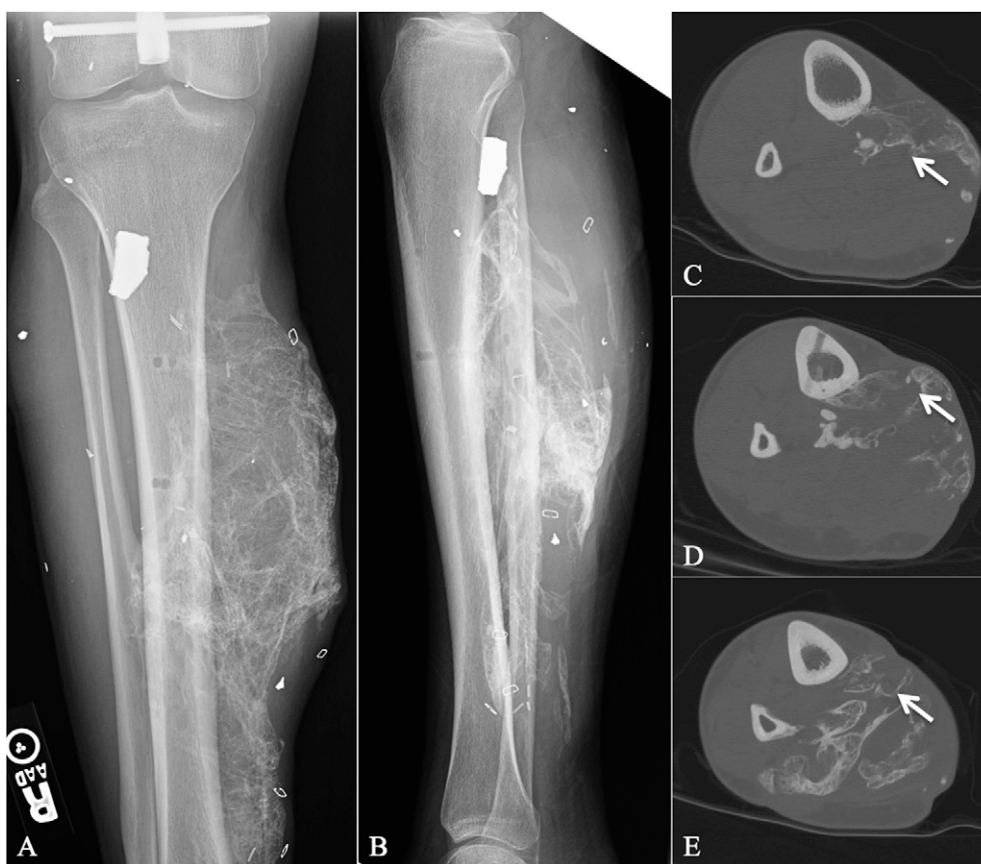


Fig. E-3

Case 3. Preoperative anteroposterior (**Fig. E-3A**) and lateral (**Fig. E-3B**) radiographs of the right tibia and corresponding axial CT scans (**Figs. E-3C, E-3D, and E-3E**) demonstrating severe heterotopic bone. The posterior tibial vessels are encased in the heterotopic bone, and their path can be traced moving proximal (**Fig. E-3C**) to distal (**Fig. E-3E**) with the arrows.

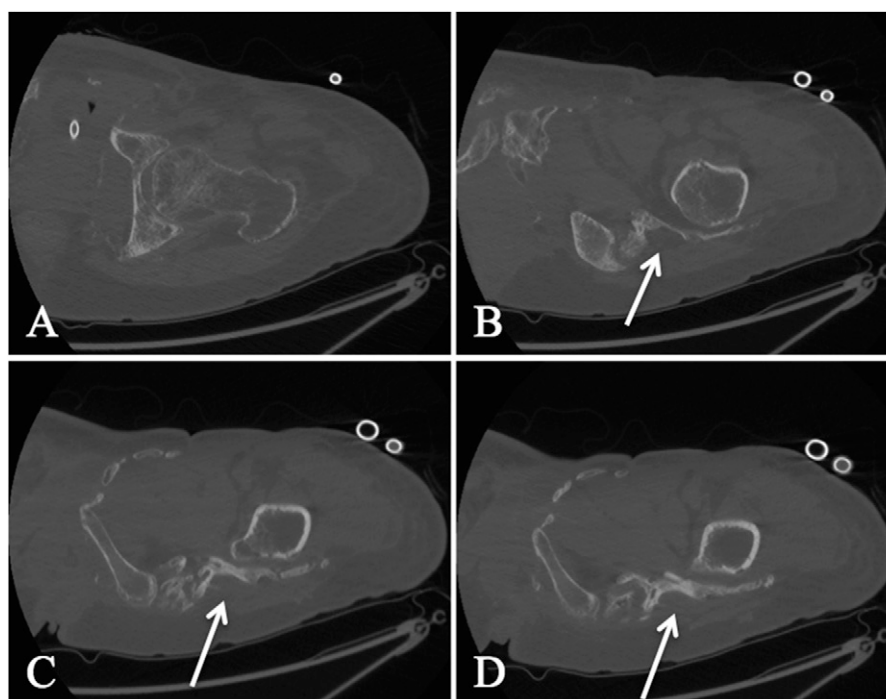


Fig. E-4

Case 5. Axial CT scans demonstrating severe heterotopic bone encasing the sciatic nerve (arrows) moving from proximal (**Fig. E-4A**) to distal (**Fig. E-4D**).



Fig. E-5

Case 3. Posterior (**Fig. E-5A**) and anterior (**Fig. E-5B**) views of the three-dimensional resin model constructed from the CT scans seen in Figs. E-3C, E-3D, and E-3E.

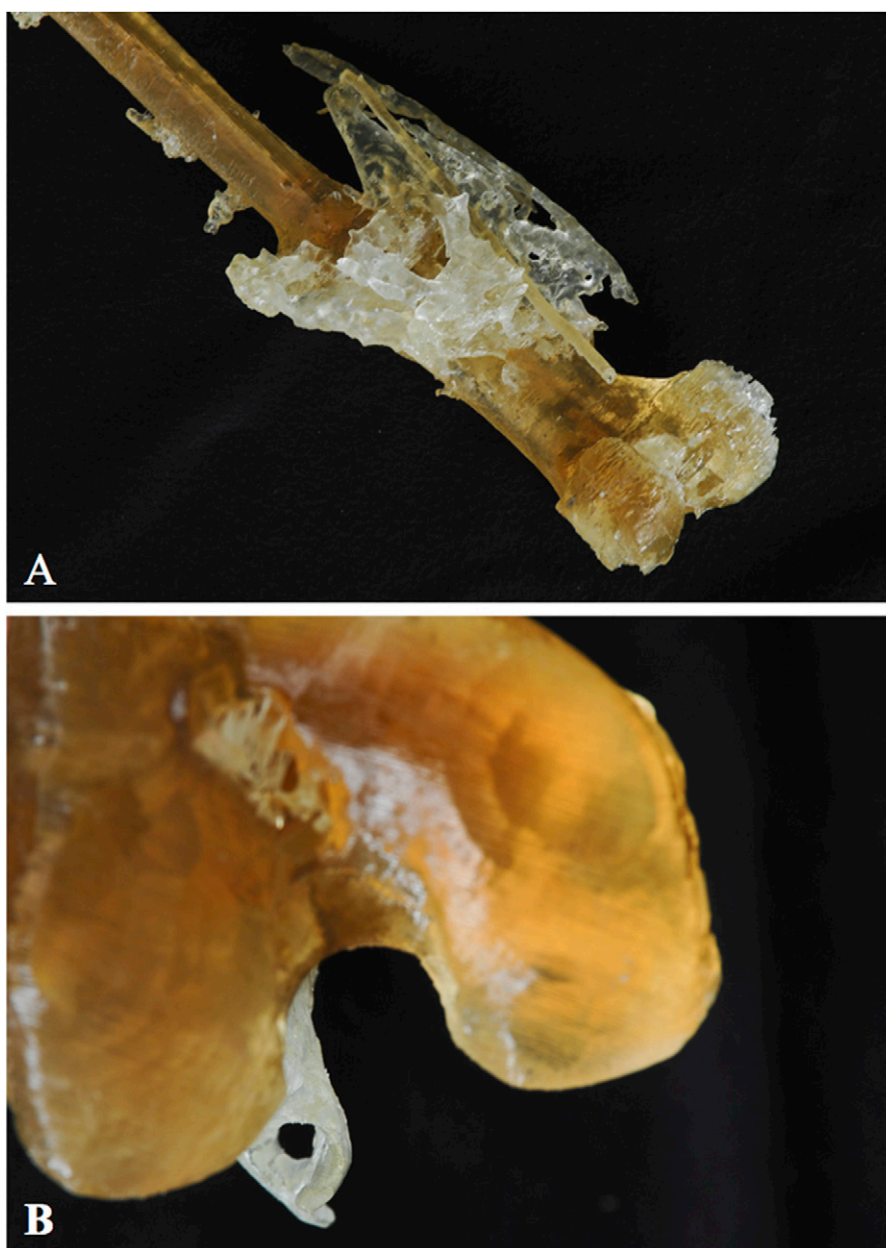


Fig. E-6

A three-dimensional resin model of severe heterotopic bone in the distal part of the femur (**Fig. E-6A**). With manipulation of the model, the path of the sciatic nerve is apparent when appropriately aligned as a tunnel through the heterotopic bone (**Fig. E-6B**).



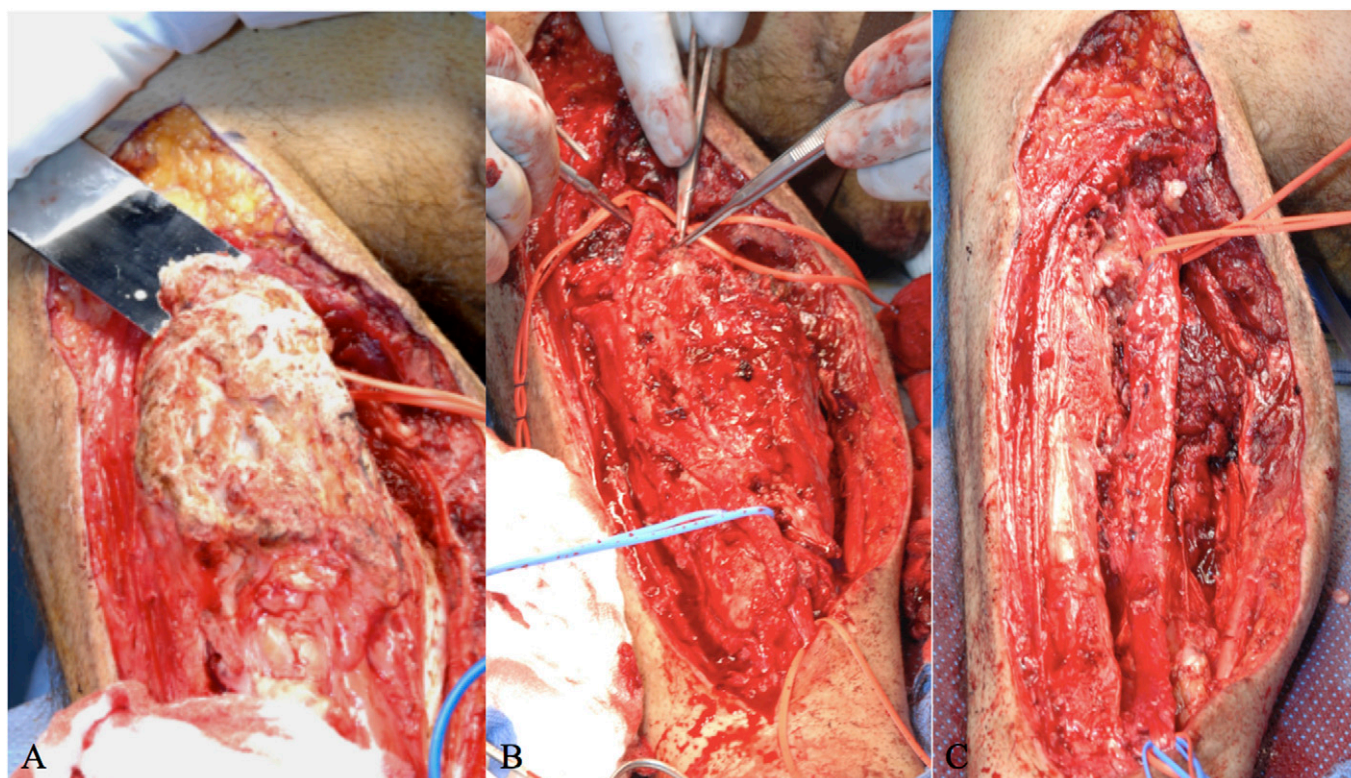


Fig. E-7

Case 3. Intraoperative images demonstrating the initial mass of heterotopic bone with proximal and distal identification of the neurovascular bundle marked with vessel loops (**Fig. E-7A**), after removal of a portion of the heterotopic bone that was directly over the neurovascular bundle (**Fig. E-7B**), and finally after removal of the symptomatic heterotopic bone (**Fig. E-7C**).

**TABLE E-1 Previous Case Reports of Heterotopic Ossification Involving Neurologic Entrapment\***

Authors	No. of Patients	Inciting Event	Entrapped Structures	Symptoms	Electrodiagnostic Studies	Treatment	Results of Treatment
Kleiman et al. <sup>5</sup>	1	R posterior hip dislocation with posterior acetabular wall fracture after ORIF	R sciatic nerve	Partial sensory and motor deficits in peroneal nerve distribution	None	Neurolysis and excision 4.5 mo after injury	Complete return of sensation at 2 mo and no return of motor after 24 mo
Derian and Bibighaus <sup>6</sup>	1	R posterior hip dislocation with acetabular fracture after closed reduction and traction	R sciatic nerve	Complete R sciatic nerve deficit	None	Neurolysis and excision 2 mo after injury	Near complete return of function (all motor groups $\geq 4/5$ ) 20 mo postop.
Manidakis et al. <sup>8</sup>	1	L posterior hip dislocation with posterior wall acetabular fracture after ORIF	L sciatic nerve	Paresthesias in L5/S1 dermatomes, decreased motor function in TA and EHL	Conduction block consistent with lesion of sciatic nerve at hip	Neurolysis and excision 8 wk after injury	Full sensory (2 mo) and motor (6 mo) function
Safaz et al. <sup>11</sup>	1	TBI after MVA	Both sciatic nerves	Weakness in both lower extremities (2/5 on R, 4/5 on L)	Bilat. axonal degeneration of sciatic nerve (total on R, partial on L)	Physical therapy	
Jones and Ward <sup>12</sup>	1	Recurrent minor trauma from weight-lifting	L sciatic nerve	Paresthesias of L L5/S1; complete paralysis of L TA, EHL, EDL, PL, PB; weakness of GS; loss of Achilles tendon reflex	Normal conduction of L sciatic nerve to level of heterotopic bone but not distal to it	Exploration and excision 2 mo after symptoms	At 24 mo, no detectable motor weakness, improved but decreased sensation, no improvement in Achilles tendon reflex
Thakker and Porter <sup>9</sup>	1	L posterior hip dislocation with acetabular fracture and sciatic nerve laceration after ORIF and nerve repair	L sciatic nerve	Pain and paresthesias along medial aspect of leg and footdrop	None	Exploration, excision, neurolysis	Resolution of pain and paresthesias with continued footdrop at 2 yr postop.
Brooke et al. <sup>24</sup>	1	Closed head injury after motorcycle accident	R femoral nerve	0/5 motor strength in quadriceps, decreased hip range of motion	4+ positive sharp waves and fibrillations without voluntary motor units in quadriceps	Exploration and excision of heterotopic bone with epineurolysis	Improved hip range of motion with near normal return of motor function at 19 mo
Laborde et al. <sup>10</sup>	1	Respiratory distress and intubation for 3 wk	R sciatic nerve	Weakness in R leg in tibial nerve distribution	None	Medical management with COX-2 inhibitors	Not reported

\*ORIF = open reduction and internal fixation, TA = tibialis anterior, EHL = extensor hallucis longus, EDL = extensor digitorum longus, PL = peroneus longus, PB = peroneus brevis, GS = gastrocnemius-soleus complex, TBI = traumatic brain injury, and MVA = motor-vehicle accident.