Tibial plateau fractures

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Intra-articular fractures of the tibial plateau are common. Injuries may involve the lateral or medial side or both. The joint articular surface may be split, depressed or a combination of both. A CT scan should be performed to see the full extent of the injury . Undisplaced fractures may be treated non-operatively with a hinged knee brace and progressive protected weight- bearing over 8–12 weeks. The surgical considerations here are to restore alignment and joint congruity . Displaced fractures require reduction and stabilisation. The articular surface, once reduced, is often held with plate and screw fixation or fine wire external fixation. For an undisplaced non-comminuted fracture of the tibial shaft, closed reduction and an above-knee cast is a safe and inexpensive treatment. At 4–6 weeks this may be converted to a patellar tendon below-knee cast to allow knee movement. Prolonged casting can lead to sti ff ness of the knee and the subtalar joint. Cast treatment requires close and constant monitoring of the position of the fracture site. To correct minor angular deformities the cast can be wedged. A patient may choose to have an intramedullary nail to allow free knee and ankle movement. This, however, risks infection of the implant and anterior knee pain. T his is another situation in which information and shared decision making can allow the patient to select the most appropriate treatment option. For comminuted and complex fractures of the tibial shaft, although cast treatment is possible, intramedullary nailing is preferred despite the potential complications of infection and anterior knee pain. Fractures at the diaphyseal–metaphyseal junction at the knee and ankle are di ffi cult to hold with an intramedullary nail and as such may be held with a plate and screws. Tibial fractures are also very amenable to external fixation with either a monolateral frame or fine wire circular construct, particularly where surgical skills and implants are not available for intramedullary nailing. Tibial plateau fractures

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