# Distal humerus (supracondylar fracture)

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Supracondylar humeral fractures are very common injuries in children. The distal humerus may go into flexion or extension, extension being by far the most common. Treatment depends on the degree of displacement. Undisplaced fractures may be protected in a collar and cu ff or backslab for 3 weeks and then progressive mobilisation. If displaced, the fracture can often be reduced with closed manipulation. If the dorsal periosteal hinge is intact, above- elbow cast immobilisation for 3–4 weeks is often su ffi cient to hold the fracture until union. If the periosteal hinge is broken, percutaneous K-wires are used to hold the fracture, supplemented with an above-elbow cast.

(c) (a) Anteroposterior and lateral radiographs of a (b) The (c) Radiograph of

condylar fractures is V olkmann’s ischaemic contracture. This is due to excessive swelling and missed compartment syndrome in the forearm. It is particularly important not to put the elbow into deep flexion if there is a lot of swelling. If deep flexion is the only way to hold the fracture, then K-wire fixation should be considered. Neurovascular injury at the time of a supracondylar frac ture is not uncommon. Careful attention should be paid to the neurovascular status of the limb. The white pulseless hand is a surgical emergency and requires immediate attention, assess ment and urgent reduction. If the pulse does not return with reduction, then the vessels should be explored by appropriately trained surgeons. The pink pulseless hand is more controv ersial and requires early senior decision making. If there is satisfactory perfusion of the limb, no suggestion of compartment syndrome and no neurological injury , then reduction and stabilisation of the fracture is warranted and a more expectant approach to the vascular injury can be taken. Often the pulse will return within 24–48 hours. Neurological injury is common, most often a neuropraxia. They often resolve on fracture reduction, stabilisation and res olution of the swelling. Malunion in varus or valgus remains a prob lem. Often the elbow will remodel the deformity in the anteroposterior flexion–extension plane, but varus and valgus malunion remodels less. Careful attention needs to be paid to the adequacy of the reduction and K-wire placement to hold the fracture to avoid angular malunion. Distal humerus (supracondylar fracture)

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