



# POSNA

## The Core Curriculum

### Radioulnar synostosis

#### Objectives

1. Describe symptoms and physical signs of congenital radioulnar synostosis
2. Discuss natural history and indications for intervention for radioulnar synostosis
3. Describe complications of treatment for radioulnar synostosis

#### Discussion

Radioulnar synostosis is one of the more common failures of separation of parts of the upper limb. There are two general types, one of which is characterized by fusion of the radius and ulna at their proximal borders, the other is fused distal to the proximal radial epiphysis. At least some cases are genetically transmitted, in particular regions such as Sicily, the incidence may be higher. It is often not noted until late childhood, as function may be normal, especially in unilateral cases. Increased wrist motion may compensate for the absent forearm motion. One individual went through Army basic training with a radioulnar synostosis. Assessment of function of the untreated individual varies somewhat among reports, Cleary reported on 23 untreated adults who got along famously. It has been suggested that individuals whose forearms are fixed in greater amounts of pronation (> 60 degrees) have more problems than those with around 20 degrees. In bilateral cases where function is impaired, recommendations for the optimum position of the non-dominant arm range from neutral to 30-40 degrees of supination. Neurovascular complications after osteotomy through the synostosis are not rare. Strategies to reduce complications include resection of a portion of the synostosis with external fixation, and performing the osteotomy in the distal radius instead of at the synostosis site. Most attempts to divide the synostosis and insert some type of interpositional material have failed. Success has been reported following vascularized fascio-fatty graft.

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