

Volkmann's ischemic contracture

Volkmann's ischemic contracture is described as a complication of supracondylar humerus fracture in **children**.

General characteristics

It is a type of ischemic **contracture of the forearm**. It usually arises from an injury of the a. brachialis, which is related to an extensor dislocated **supracondylar** fracture of the humerus, from the pressure of loading a tight circular cast. However, it can also occur in other types of injuries - forearm fractures, soft tissue injuries, etc. The pathophysiological basis is that there is ischemia of the volar muscles of the forearm. If the condition persists for more than 24 hours, necrosis of the muscles and their replacement by connective tissue with subsequent loss of function occurs. In severe cases, the fingers become claw-like and become afunctional.

Clinical picture

The pathogenesis is contracture resulting from **inadequate arterial perfusion and venostasis**. All this leads to ischemic **degeneration of the muscles**. The infarct has an ellipsoidal shape and is located in the area along the course of the a. interossea communis. On the basis of healing of the ischemic parts by scarring, the m. flexor digitorum superficialis et profundus begin to contract and the **flexion of the wrist and clawed position of the fingers** of the hand develop. In addition, paresis of the n. ulnaris et medianus is added, which leads to the metacarpophalangeal joint then being in flexion and the interphalangeal joints in extension (or vice versa).

Prevention

Early treatment of the fracture (conservative repositioning and percutaneous fixation) and **comprehensive monitoring** of the limb condition.

Links

Related articles

- Compartment syndrome
- Fractures of the distal end of the humerus
- Sudeck's algodystrophic syndrome

Reference

- PASTOR, Jan. *Langenbeck's medical web page* [online]. [cit. 2009]. <<https://langenbeck.webs.com/>>.



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