

SPASTIC & ISCHAEMIC CONTRACTURE RELEASE

Ischaemic Contracture

Classification	Mild (localised) Moderate (classic) Severe
Treatment ladder	Avoid – early fasciotomy – high index of suspicion Elevation Rx oedema Dynamic splinting Surgery at 6-12 months Flexor / pronator slide, neurolysis lengthening tenotomy Flexor / pronator slide (extensive) +/- tendon transfers Free muscle transplantation
Post-op	Splinting Rehabilitation / re-education
Causation	Fractures Blunt injury / crush Elbow dislocations Burns Bites (snake / spider)
References	Gulgonen, A (2001). Surgery for Volkmann's ischaemic contracture. J Hand Surg 26B: 4: 283-296 Tsuge, K (1993) Management of established Volkmann's contracture. In Green DP (ed) Operative Hand Surgery 3 rd Edn Churchill Livingstone, 499-514

Spastic Contracture

Incidence	Common 2-2.5 / 100 live births
Pattern	Shoulder adduction Elbow flexion Forearm pronation Wrist + finger flexion Thumb adduction & flexion
Pre-op assessment	General muscle function Hand sensation Age (cooperation) Proximal to distal
Non-surgical Rx	PT splinting medication
Surgery	Pronation deformity Flexor – pronator slide PQ release Flexor release Wrist & Finger as above FCU & FCR tenotomy/lengthening

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FDS / FDP lengthening
Bony procedures (fusion, PRC),
Intrinsic release

Thumb deformity Releases (adductor, 1st DI, FPB, 1st web)
Tendon transfers (BR, FDS, PL, EPL, FCR)
Joint stabilisations (CMC, MCP, IP)

References

Gschwend, C Tonkin, M (1992). Surgery for cerebral palsy: part 1 Classification and operative procedures for pronation deformity. J Hand Surg. 17B: 4: 391-395

Gschwend, C Tonkin, M (1992). Surgery for cerebral palsy: part 1 Flexion deformity of the wrist and fingers. J Hand Surg. 17B: 4: 396-400

Tonkin M.A. (2000) The upper Limb in Cerebral Palsy. In Gupta, Kay & Schecker (eds) The Growing Hand Mosby, 447-459