

Merging research and advanced clinical knowledge – an illustration from paediatric hand therapy

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AIMS

- To examine the evidence for conservative and surgical approaches for camptodactyly
- Use the findings, in conjunction with clinical experience, to develop a practice brief including standard assessment procedures and treatment guidelines

METHODS

- Clinical question: In children (0-18) with camptodactyly (*population*) how effective is conservative management (*intervention*) compared with surgical management (comparison) at reducing contracture (*outcome*)?
- Electronic databases searched, papers published within 1994-2015
- Validity & Reliability of studies assessed using CASP tool, Rating of NHMRC Level of Evidence
- Review of literature, analysis of findings against current and historical clinical data and practice

RESULTS

- Three electronic databases: six studies, all retrospective case series (NHMRC Level IV), mixed methodological quality
- Participants: n = 12-57
- Interventions: Passive stretch, splinting, surgical correction
- Five different methods of classification of contracture
- Primary outcome: improvement in fixed flexion deformity (FFD)
- Complications: loss of ROM, skin/pressure, non-adherence, further procedures

LITERATURE REVIEW FINDINGS

Passive Stretch

- Intensive protocol: 5 minutes of stretch, 20 x per day
- Treatment time 5-13 months: promising improvements in FFD
- 2 years follow-up in young children provides limited evidence for long term maintenance

Splinting

- Variable splint design, wearing protocols, unknown time to maximum correction
- Follow-up 9 months to 13 years: supports longer term maintenance
- Mild (<30°) & moderate (30-60°) deformities most likely to improve in FFD
- Preferred intervention for moderate deformities in most cases

Surgery

- Reserved for severe deformity (>60°) if unresponsive to strict adherence to conservative intervention
- Meticulous assessment, surgery and post-operative intensive hand therapy required
- Longer term studies to determine ongoing maintenance required



DATA SYNTHESIS: RECOMMENDATIONS

Detailed clinical assessment

- X-ray of PIPJ to assess for bony changes
- ROM measures: passive, active, position of joints, record placement of goniometer
- Use FFD to classify contracture (mild, mod, severe)
- Clinical examination to define potential contracture causes
- Pain and Cosmesis: assess via Visual analogue scale (VAS)
- Assessment of functional impact / impairment: e.g. COPM

Occupational Therapy intervention, patient/family education and follow-up should include:

- Goals for treatment, risks, side effects
- Growth periods, potential increase of contracture
- Available conservative measures: required frequency, dosage
- Splinting: design, wearing regimes, precautions, reviews
- Time to maximum correction, monitor until skeletal maturity
- Surgery last resort: strict adherence to post-op therapy imperative; detailed operative report to guide therapy

SIGNIFICANCE OF FINDINGS TO ALLIED HEALTH

- It is important for AH clinicians to use the evidence cycle to inform best practice
- Practice briefs can be used to synthesize literature findings & expert opinion to guide best outcomes for rare conditions

