

## EXCISION OF THE CENTRAL PHYSEAL BAR: A MODIFICATION OF LANGENSKIÖLD'S PROCEDURE

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In the growing child a central bone bridge fusing epiphysis to metaphysis will lead to progressive shortening and deformity. Provided that its size does not exceed half the cross-sectional area of the physis normal growth can be restored by resecting the bridge, and filling the defect with fat (Langenskiöld 1981; Peterson 1984). Furthermore, as growth resumes, minor deformities will correct spontaneously. Accurate mapping of the defect and operative planning are the keys to the success of this difficult surgery and biplanar tomograms or oblique CT scans are most helpful. The conventional surgical approach is through a metaphyseal window. Considerable stereotactic skill is required and there may be difficulties with irrigation, suction, illumination, magnification, and introducing dental mirrors and cutting instruments. The use of the arthroscope has recently been advocated in this context (Stricker 1992).

**Operative technique.** A modified approach was developed

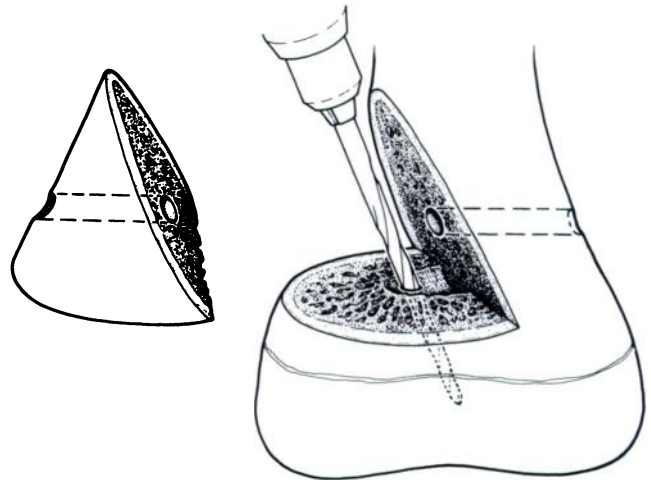


Fig. 1

Diagram to show the operative procedure.

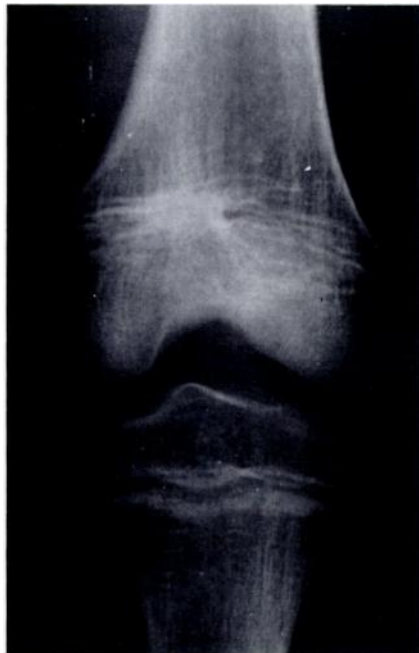


Fig. 2a



Fig. 2b



Fig. 2c

Figure 2a – Central bone bridge in the physis of a seven-year-old girl. Figure 2b – Two months postoperatively. Figure 2c – Fourteen months postoperatively. The bone bridge has not recurred, the physis appears to have regenerated, and the deformity has corrected spontaneously.

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in which a predrilled wedge of metaphysis is resected. The important horizontal cut is made 5 to 10 mm from the physis and parallel to it using the image intensifier and taking care not to damage the perichondrial ring. A tail of endosteal scarring, which extends into the metaphysis in such cases, is clearly seen on the horizontal