Both RH and FH underwent arthroscopy and synovectomy. Multiple free osteochondromatosus bodies were removed as well as several smaller ones attached to the synovium. The histology of the synovium in both cases was similar, showing metaplastic foci of cartilage in the synovial tissue beneath the lining layer, typical of synovial chondromatosis. Some areas were undergoing calcification or ossification (Fig. 2).

All the affected individuals in this family were tall and thin with a remarkably similar body habitus.

Discussion. Most authors point out that conditions other than synovial chondromatosis may be associated with the presence of radiopaque intra-articular loose bodies (Milgram 1977; Murphy, Dahlin and Sullivan 1962; Mussey and Henderson 1949; Wilmuth 1941). The critical criterion of synovial chondromatosis is the presence of intra-synovial and metaplastic cartilage which was present in both of our patients who had biopsies. All three showed degeneration, probably resulting from prolonged mechanical derangement.

Each of our patients first developed symptoms at an age when osteoarthritis is not seen; in fact, their presentation was typical of synovial chondromatosis, in that they were young men with involvement of the knee. Their pedigree does not represent a clear-cut genetic pattern but it is consistent with a sex-linked pattern of inheritance with variable penetrance (Fig. 3).

No benefits in any form have been received or will be received from a commercial party related directly or indirectly to the subject of this article.

REFERENCES


A METHOD OF ELBOW ARTHRODESIS: BRIEF REPORT

G. B. IRVINE, P. J. GREGG

Recent literature concerning surgery of the arthritic elbow has concentrated on prosthetic replacement; however, occasional patients are encountered who require surgery but are unsuitable for arthroplasty. If arthrodesis is contemplated the surgeon will find that many of the standard techniques (Russell 1987) were described during the era of tuberculous infection and are less applicable nowadays.

We describe a method of fusion which has been used successfully in three recent patients with secondary degenerative arthritis and in whom total elbow replacement was considered inappropriate.

Operative details. With the patient in the lateral position and the arm supported on a padded rest a 15 cm longitudinal skin incision, centred over the tip of the olecranon, is made. The ulnar nerve is identified and protected throughout the operation. An inverted V-shaped incision is made into the triceps expansion so that a flap of tendon can be reflected distally. The elbow joint is entered and access is improved by further dividing the capsule and collateral ligaments. After resecting the radial head, any remaining articular cartilage and the subchondral bone of the olecranon and articulating surfaces of the humeral condyles is removed with gouges and a dental burr (Fig. 1). Cancellous bone chips,
harvested from the ipsilateral iliac crest, are packed into the sigmoid notch and the elbow is then held in the required position and secured with two crossed malleolar screws inserted from the olecranon into each supracONDylar ridge. The thin cortical bone of the olecranon fossa and posteromedial and posterolateral aspects of the olecranon is removed. Additional cancellous bone is packed into the olecranon fossa and corticocancellous strips are laid over the whole decorticated area (Fig. 2). The triceps expansion is then repaired and the wound closed over a vacuum drain.

After releasing the tourniquet a padded plaster back slab is applied and this is replaced by a close-fitting cylinder cast after removal of the skin sutures. Immobilisation is continued until there is sound clinical and radiological fusion (Figs 3 and 4); this took 16 weeks in each of our three cases.

Discussion. Rheumatoid arthritis is the commonest pathological process to affect the elbow and it is in this disease that the advances in elbow arthroplasty have been most beneficial. Primary arthrodesis is hardly ever indicated because the function of the ipsilateral wrist and hand is often also compromised. Osteoarthritis of the elbow is less common and usually the sequel to trauma, burnt-out inflammatory arthritis, infection or blood dyscrasia. The function of adjacent joints is usually not impaired and, possibly for this reason, the results of elbow replacement have been less satisfactory, with aseptic loosening a more frequent problem (Morrey et al. 1981; Soni and Cavendish 1984).

Previously described methods of elbow fusion have been associated with an average failure rate of 50% (Koch and Lipscomb 1967) which has been attributed to the magnitude of the forces acting across the joint and the peculiarity of the local anatomy which militates against good bony apposition and internal fixation. Although our early success is encouraging more patients are required before it will be known if this technique is any more successful in achieving fusion than the older methods.

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LOWE R FEMORAL OSTEOTOMY IN CEREBRAL PALSY: BRIEF REPORT

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Internal rotation deformities of the lower limb are common in cerebral palsy, and may lead to in-toeing gait with its attendant functional and cosmetic consequences. Conservative and soft tissue procedures to correct this have not been successful in older children, (Bleck 1987), and in adults the recovery time to independent walking is prolonged (Steel 1980). For these reasons bony procedures have been advocated.

Hoffer (1981) proposed supracondylar osteotomy of the femur for patients with a stable hip and noted that it was easier to perform than subtrochanteric osteotomy, had fewer complications, and allowed earlier mobilisation. Nevertheless three of his 11 patients had pin track infections. These can be avoided by using a lower femoral osteotomy with internal fixation.

Patients. Twenty-five osteotomies were performed in 15 patients with spastic cerebral palsy (five hemiplegic, 10 diplegic or quadriplegic). All could walk independently. The mean age was 13 years (range eight to 23 years) and the mean follow-up 3.7 years (range two to five years). Patients were selected for surgery if they walked with in-toeing, and showed at least one of the following features: cosmetically unacceptable gait; excessive shoe wear; frequent tripping; and tiring easily when walking.