Elbow Rheumatoid Arthritis

The elbow joint is involved in 20% to 50% of patients with rheumatoid arthritis.

The function of the joint may deteriorate as the disease progresses, to the point of compromising activities of daily living and independence.

The two main surgical procedures currently being performed are synovectomy (most often combined with radial head excision) and total elbow arthroplasty.

Synovectomy

The standard, synovectomy of the elbow usually preserves or improves motion, especially forearm rotation. [knee, hip, wrist, and hand]

Synovectomy alone has produced results comparable to the combined procedure, as reported by Copeland and Taylor, but excision of the radial head is considered by most to be an essential part of the procedure.

Morrey and Adams recommended removal of the radial head when there is clinical involvement of the radiohumeral or radioulnar joints.

Most rarely perform a synovectomy of a painful elbow in rheumatoid disease without excising the radial head. Results of good to excellent been reported 78%.

The elbow synovectomy benefited teven in advanced disease stages, but that the procedure cannot be expected to prevent a gradual deterioration over time.

Rymaszewski et al. recommended replacing the radial head with a spacer to avoid biomechanical changes in the elbow, but most surgeons reporting large series have not found this necessary for satisfactory clinical results. We agree and do not use a spacer.

Lee and Morrey and Horiuchi et al. reported good results with arthroscopic elbow synovectomy. The arthroscopic technique may have advantages over the open technique similar to in the knee, but long-term results are unavailable.

Technique
Use a straight lateral approach or the Kocher modification
Remove subperiosteally the origins of the brachioradialis and ECRB
Preserve as much of the lateral capsule and ligamentous structures
Divide the annular ligament
Excise radial head at neck
Synovectomy
Repair muscles with bone anchor to lateral condyle
Repair annular ligament
Back slab for 2 weeks and the mobilise

Arthroplasty

The most common diagnosis for which total elbow arthroplasty is performed is rheumatoid arthritis, with reports of satisfactory results in approximately 90% of patients

Ewald et al. reported the results of 202 capitellocondylar prostheses 2 to 15 years after surgery. Pain relief and functional improvement were excellent; on a 100-point scale, patients scored an average of 26 preoperatively and an average of 91 postoperatively. Reoperation was required in 5% for loosening, dislocation, or infection. I

Morrey reported 92.4% survival at 10 to 15 years in 69 patients with rheumatoid arthritis treated with total elbow arthroplasty using the Mayo modified Coonrad semiconstrained prosthesis; 13% required revision, and 88% had good or excellent results.

Fascial arthroplasty of the elbow rarely is indicated and should be considered only for severe fibrous or bony ankylosis.