

Tuberculosis of the elbow

A report of 10 cases

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We treated 10 cases of tuberculosis of the elbow with a 9-month antitubercular drug regimen, and surgery when indicated. The diagnosis was confirmed in 8 cases by histopathological examination and 2 cases were treated on clinical radiographic

grounds. The follow-up ranged from 1 year to 3 years. The results were excellent in synovial and extraarticular lesions. Only in cases with minimal involvement of articular cartilage was a good range of movement achieved.

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Tuberculosis is not uncommon in developing and underdeveloped countries and lesions in the elbow region constitute 2-5 percent of all skeletal tuberculosis (Tuli 1991). We present our experience in 10 patients.

Patients and methods

We treated 10 patients with tuberculosis of the elbow 1989-1993. There were 7 men and 3 women with an average age of 36 (18-55) years. The diagnosis was established by histopathological examination in 8 cases, cases 1 and 2 were treated on clinicoradiographic grounds.

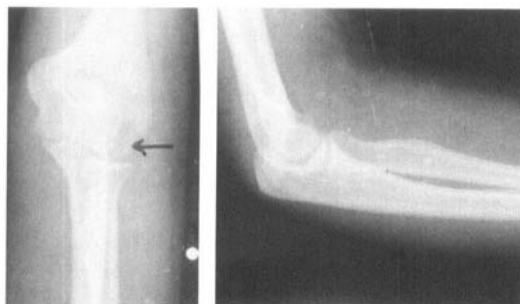
The duration of symptoms ranged from 2 months to 3 years. All patients had pain, 7 had swelling and 1 patient had a discharging sinus. The sinus was adherent to the bone and not to the lymph nodes. Supratrochlear and/or axillary lymph nodes were involved in 4 cases. Elbow extension was restricted in all cases, with an average range of movements of 95 degrees.

The disease was restricted to the synovial membrane in 3 cases. It was extra-articular or minimally involved the articular cartilage of the lower end of the humerus in 3 cases and of the olecranon in 1 case. The remaining 3 cases had extensive involvement of the articular cartilage of the humerus, but in none of them was pathological dislocation seen. The ESR was high in 8 cases and a strongly positive Mantoux test was found in 8 cases. None of the patients had abnormal chest radiographs, but 1 patient had tuberculosis of the hamate bone on the same side.

All patients were treated with rifampicin, isoniazide and pyrazinamide for 2 months, followed by isoniazid and rifampicin for 7 months. Surgery was performed in 6 cases including curettage of the bone with minimal joint clearance (3 cases), and debridement and total synovectomy (3 cases). The elbow joint was immobilized for 3-6 weeks postoperatively, after which active movements were encouraged. Night splints were used for 2-5 months. A follow-up examination was performed 1-3 years after treatment.

Results

In cases 1-5, full range of motion was obtained. 3 of these patients had only extraarticular involvement and were not operated on. Cases 6 and 7 had minimal involvement of joints and were treated with curettage and synovectomy. In cases 8-10, treated by synovectomy and debridement because of exten-



Case 5. An osteolytic area in the lateral humeral condyle (arrow) and an abscess in the upper forearm (arrow head) are present.

Table 1. 10 cases of tuberculosis of the elbow

Case	Age	Sex	Type of lesion	Surgery	Results ROM (°)
1	18	M	S	-	Full
2	25	M	S	-	Full
3	45	F	S	B	-5° extension
4	32	F	E	B	Full
5	24	M	M	D	Full
6	41	M	M	D	-10° extension, -5° flexion
7	29	M	M	C	Full
8	55	M	A	S	20-80°
9	45	F	A	S	50-80°
10	50	M	A	S, E	55-75°

Type of lesions:

S synovial.

E extraarticular, olecranon.

M minimal articular involvement, lower end of humerus.

A articular, extensive involvement.

Surgery:

B biopsy.

D drainage, curettage, minimal joint clearance.

C curettage, minimal clearance.

S synovectomy and joint debridement.

E excision of sinus.

Results: ROM range of movement.

sive involvement of the articular cartilage, only 20-60 degrees of movement was achieved (Table 1).

Discussion

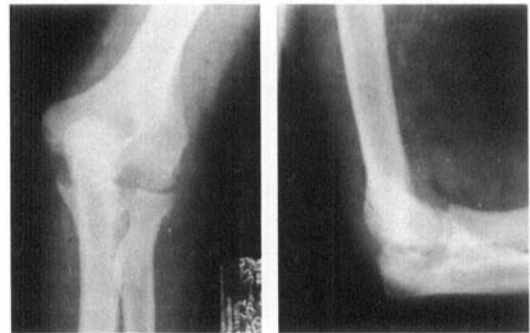
Tuberculosis of the elbow commonly starts from the olecranon or the lower end of the humerus. Sometimes the onset is in the synovia or from the upper end of the radius (Wilson 1953, Tuli 1991). In our series, the lower end of the humerus was the commonest site of involvement followed by the upper end of the ulna.

40 years ago Wilson (1953) treated elbow tuberculosis with a 3-month stay in the hospital and a plaster cast for 1.5 years. With the advent of antitubercular drugs, the prognosis has improved greatly. In the majority of cases of tuberculosis of the elbow, a good range of movements is obtained (Martini and Gottesman 1980). Srivastava (1983) reported results in 44 patients and found a good prognosis in mono-compartmental lesions, synovial lesions and extra-articular lesions.

We stress the importance of maintaining a high level of clinical awareness for making an early diagnosis. The prognosis is excellent in synovial and extra-articular lesions, which can be treated only with anti-tubercular drugs. In cases with minimal involvement of the articular cartilage, a good range of movement can be achieved with early surgery. In advanced arthritis, the results are poor.



Case 6.



Case 8.



Case 9.

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