Acta orthop. scand. *49*, 445–447, 1978

DYSTROPHIC CALCIFICATION IN TUBERCULAR LESIONS OF BURSAE

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Four patients with extensive dystrophic calcification, in osteoarticular tubercular lesions of relatively short duration, are described. All lesions healed satisfactorily after treatment with antitubercular drugs combined in some cases with *en bloc* excision.

Key words: dystrophic calcification; lymph nodes; tubercular lesions; osteoarticular tuberculosis

Accepted 9.iii.78

Dystrophic calcification in long-standing tubercular lesions of lymph nodes and abscesses is a known entity. However, extensive dystrophic calcification in osteoarticular tubercular lesions of shorter duration has not been reported. Hence, the clinical, radiological, operative and histopathological features of four such patients with extensive dystrophic calcification around the hip and elbow are described.

CASE REPORTS

Case 1

B.L., a 30-year-old mean, presented in November 1973 with a 6-year history of pain and swelling over the left trochanteric region and the appearance of similar swelling and pain over the right trochanteric region in the course of the previous 3 years. The swellings were associated with fever. Following treatment with antibiotics and antitubercular drugs, the swellings had regressed temporarily but gradually the symptoms had recurred.

Clinical examination of the patient at the initial presentation revealed a diffuse swelling on either side of the trochanteric and gluteal region. There was a sinus on the left side, discharging thin serous fluid. The skin around the sinus was pigmented and adherent to the underlying structures. A hard, nodular, tender mass could be felt on deep palpation. The mass was fixed to the greater trochanter. The inguinal lymph nodes were enlarged and tender. There were no clinical signs of hip joint disease.

Radiological examination showed extensive calcifications of the trochanteric region of both hips without any involvement of the joints or the pelvic bones (Figure 1).

Exploration of the right swelling produced necrotic and calcareous matter. Histological examination of the specimen showed a characteristic tubercular lesion with dystrophic calcification (Figure 2).

Following treatment with antitubercular drugs the lesions healed.

Case 2

M.A., a 12-year-old boy, was admitted on 12.10.76 with complaints of a tender swelling in the left gluteal region. The symptoms had begun after a fall from a bicycle 11 months previously. The swelling had increased in size with episodes of fever and decreased, after treatment, in 7–10 days. At admission of diffuse swelling (Figure 3) was seen and on deep palpation a hard mass with restricted mobility was felt under the gluteus maximus. Local temperature was raised. The boy

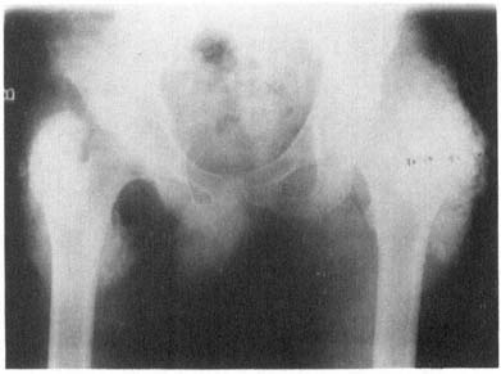

Figure 1. X-ray of the pelvis including both hips shows an extensive calcified mass in the trochanteric region on both sides (Case 1).

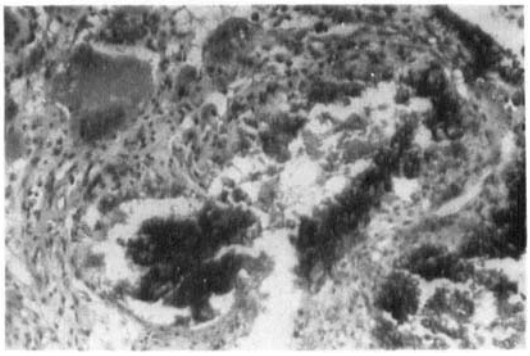

Figure 2. Microphotograph of Case 1 showing tubercular granulomas with large areas of calcification. Note also one large giant cell with bipolar arrangement of the nuclei (H&E ×160).

Figure 3. Clinical photograph showing diffuse swelling in the left trochanteric region (Case 2).

had lumbar lordosis and with the exception of a flexion deformity of 40 degrees, the hip joint was clinically free from disease. Wasting of the glutei and the quadriceps muscles was also present. X-ray of the region showed a soft tissue swelling and extensive calcification, similar to Case 1.

The swelling, which was situated beneath the gluteus maximus, was excised and was found to consist of tubercular pus with cheasy material and calcified masses.

Microscopic examination showed a tubercular lesion with extensive dystrophic calcification. The patient recovered satisfactorily following treatment with antitubercular drugs.

Case 3

D.N., a 17-year-old boy, attended the hospital in July 1974 with complaints of a swelling of the anteromedial aspect of the left elbow, of insidious onset 1 year previously (Figure 4). The elbow was ankylosed in extension because of an accident 3 years earlier.

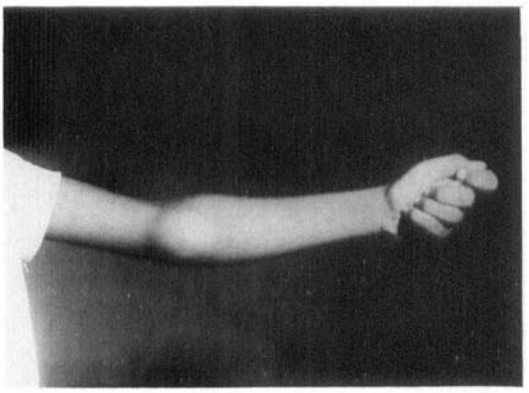

Figure 4. Clinical photograph showing swelling over the front of the elbow (Case 3).

Clinical examination revealed a localized, tense, fluctuant, nonpulsatile swelling over the anteromedial aspect of the left elbow. Movement of the elbow was restricted to 0–30 degrees.

Radiological examination of the elbow showed a well-delineated, pedunculated soft tissue swelling arising from the anterior aspect of the elbow joint with evidence of extensive calcification within the swelling. There were destructive changes in the elbow joint (Figure 5). *En bloc* excision of the swelling was performed. It contained tubercular pus and calcified debris.

The patient made a good recovery after treatment with antitubercular drugs and even regained a good range of elbow motion.

Figure 5. X-ray of the left elbow showing well delineated, pedunculated cystic swelling over the anteromedial aspect of the elbow joint (Case 3).

Figure 6. X-ray of the right elbow showing soft tissue swelling with a calcified mass behind the distal end of the humerus and the elbow joint (Case 4).

Case 4

M.D., a 7-year-old girl, presented with complaints of pain and swelling on the posterior aspect of the right elbow which had begun 2 months previously. Clinical examination revealed a well defined oblong non-tender swelling along the posterior aspect of the lower fourth of the arm. The swelling was mobile with a variable consistency from soft and fluctuant to hard and nodular. The local temperature of the swelling was raised. Elbow motion ranged from 30–120 degrees. Axillary lymph nodes were enlarged and tender.

The patient also had a discharging sinus from her right tibia.

X-rays of the right elbow (Figure 6) showed a calcified mass along the back of the distal end of the humerus without any osseous lesion. X-ray of the right tibia showed periosteal reaction and sclerosis in the upper third of the tibia.

En bloc excision of the swelling was performed. The mass contained typical tubercular pus with cheasy material and a calcified nodular mass. The patient regained full function of the elbow following antitubercular drugs.

DISCUSSION

Deposition of calcium salts in dead and necrotic tissues is termed dystrophic calcification and is found in various pathological conditions of which tuberculosis is one of the most common (Anderson 1971, Florey 1970). Tuberculous calcifications are found most frequently in lymph nodes and in cold abscesses of long standing. In the four cases presented here, extensive dystrophic calcification was seen in three cases of relatively short duration, i.e., 2 months to 1 year; the first case had a disease process lasting 6 years. All the four cases posed clinical and radiological diagnostic problems and the tuberculous nature of the lesions was revealed only after exploration and histopathological examination. Even though tuberculosis in general and osteoarticular tuberculosis in particular is very common in our country, such extensive dystrophic calcification is very unusual and to our knowledge has not been described earlier in the literature.

ACKNOWLEDGEMENT

Sincere appreciation is expressed to Mr. D. K. Mathur for photographic assistance and to Sri Prem Nath for secretarial assistance.

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