

## Tuberculous Osteopathy

### A Case Report

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Tuberculosis of the bones is usually hematogeneous in origin. Focal extension from other organs is rare. (7).

The primary focus from which the bacteria enter the blood remains unknown. Therefore T.B. of the bones may be regarded as a primary lesion and contusion is a predisposing factor for accumulation of bacteria in the bones. (7). The small spongy bones, and the epiphysis of long bones of youth are predominately involved, as opposed to osteomyelitis which involves the metaphysis and diaphysis of the bones. (2,4,10).

We recently encountered a case of tuberculous osteopathy presenting interesting clinical symptoms. The patient, a 22 year old house-wife suffering from pain in the back, was hospitalized. Her past medical history showed amenorrhea for six months prior to admission. Five months before admission backache had begun, and about two weeks prior to admission a painful abscess appeared on the superior medial part of the right thigh; this was incised three days later and a purulent fluid discharge was drained. A few painful lymph-nodes were also palpable in the right groin. The pain in the back was intensified by motion and radiated to the lower abdomen and right groin. Profuse perspiration was also present, with no detectable fever.

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She had recently noted a mass about 10cm. in diameter on the left-hand side of the lumbar vertebrae.

Physical examination showed her to be slightly undernourished, physical findings were essentially negative, except for a fluctuating soft mass palpable at the left side of L1-L2 vertebrae. The liver was palpable 2cm. below the costal margin and was hard and painful.

A hard, painful elongated mass was felt at both iliac fossa. There was purulent wound on the right thigh (Fig.1. A & B)

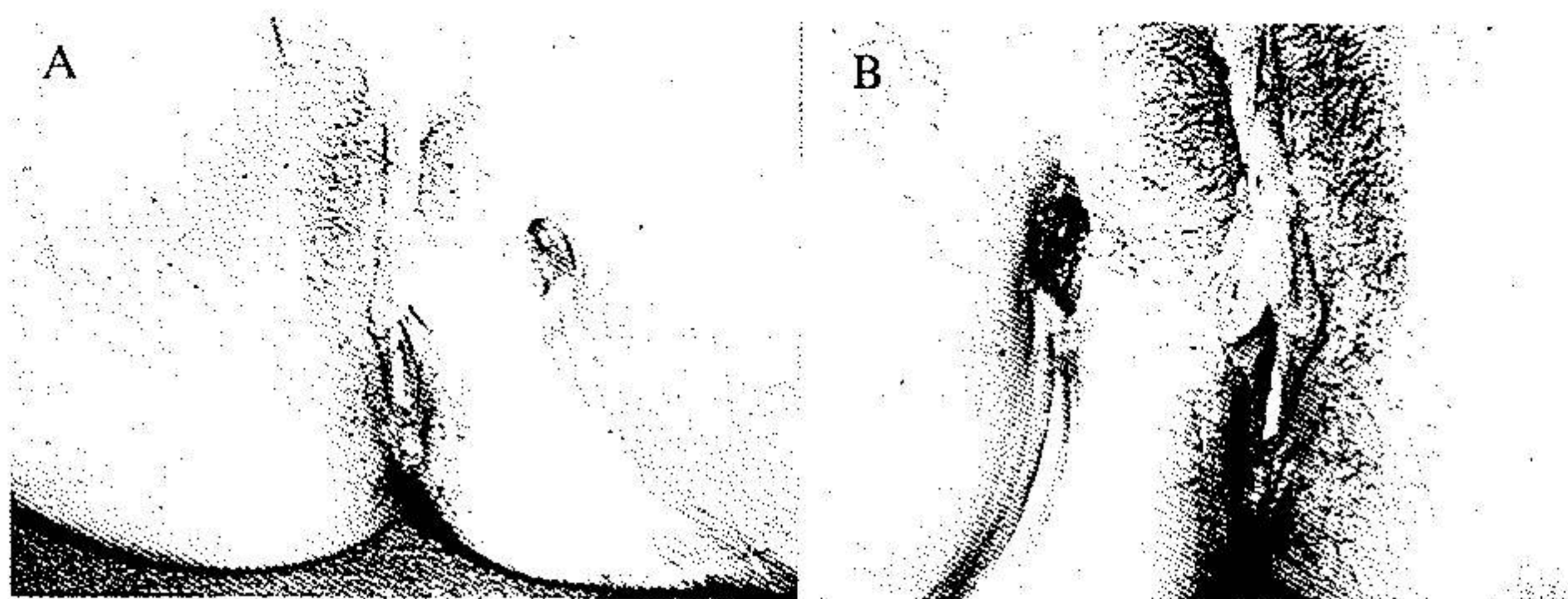


Fig. 1 — The purulent wound on the right thigh: a) Anterior b) Posterior

Laboratory studies revealed a sedimentation rate of 20mm. after one hour; W.B.C. of 7800 with following differential eos., 4 %; seg., 66 %; lymph. 18 %; mono., 6 %; baso., 6 %; hemoglobin was 12.6gm/100 ml.; T.B. Skin test 3+; VDRL (in blood and cerebrospinal fluid) negative; Nelson test, negative; and Frei test, negative. Blood sugar was 110mg %; urea, 30mg; Ca, 11mg %; P, 4.3mg. %; alkaline phosphatase, 5.7 (K.A.); twenty-four hours urinary calcium in three different determinations were 100,200, and 270mg. per liter. Urine culture was negative.

The culture of groin fistula secretion showed staphylococcus and gram-negative bacteria, which were sensitive to gentamycin. The secretion was negative for fungi.

Biopsy of right groin lymph nodes showed an inflammatory reaction of granulomatous type. Giant and epithelioid cells with central necrosis and leukocytic infiltrate with granulation tissue were present. (Fig.2).



Fig. 2 — Histological aspect of right groin lymph node: giant and epithelioid cells with central necrosis and leucocytic infiltrate with granulation tissue.



Fig. 3 — Histological aspect of back abscess.

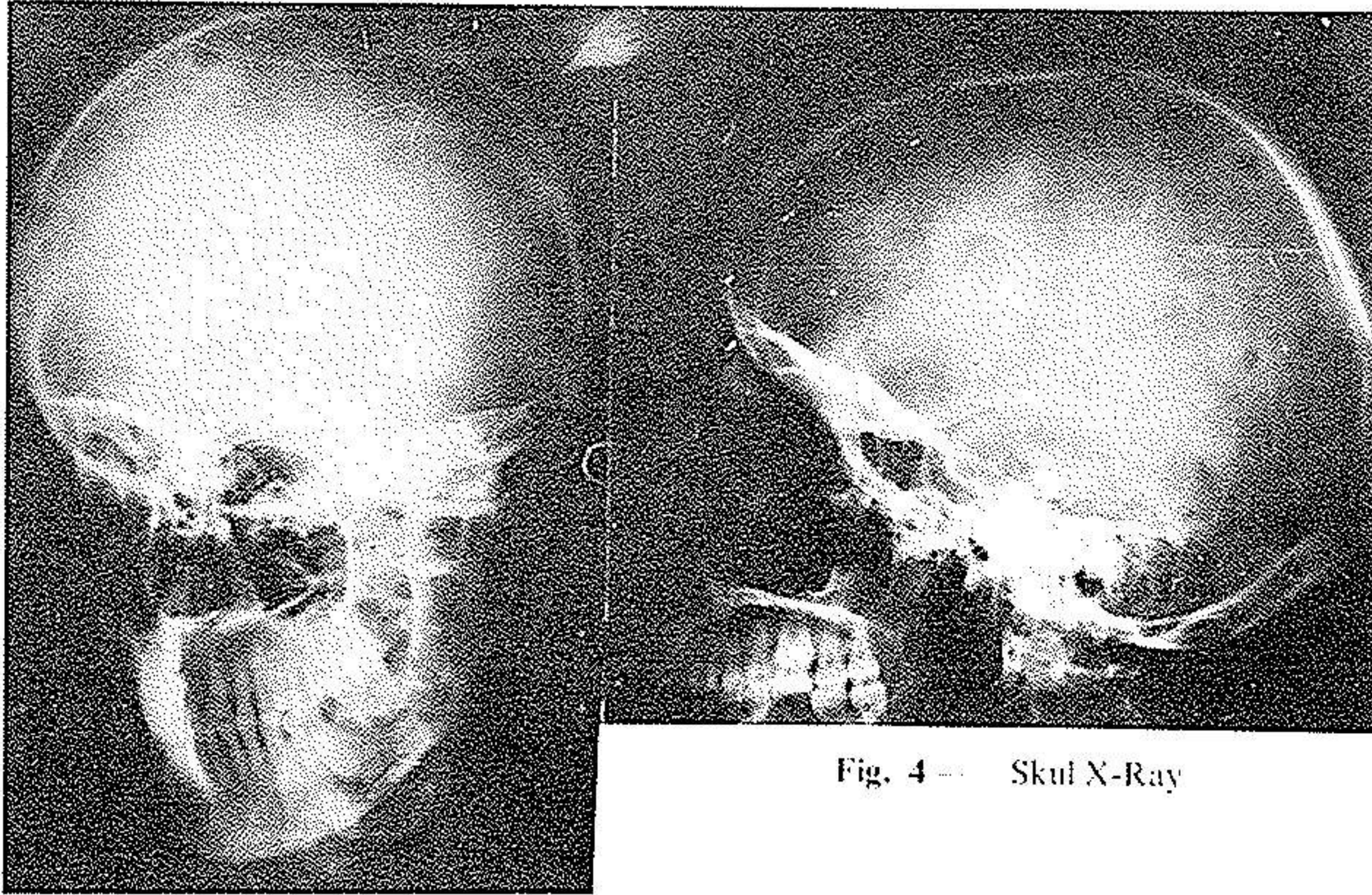


Fig. 4 — Skul X-Ray

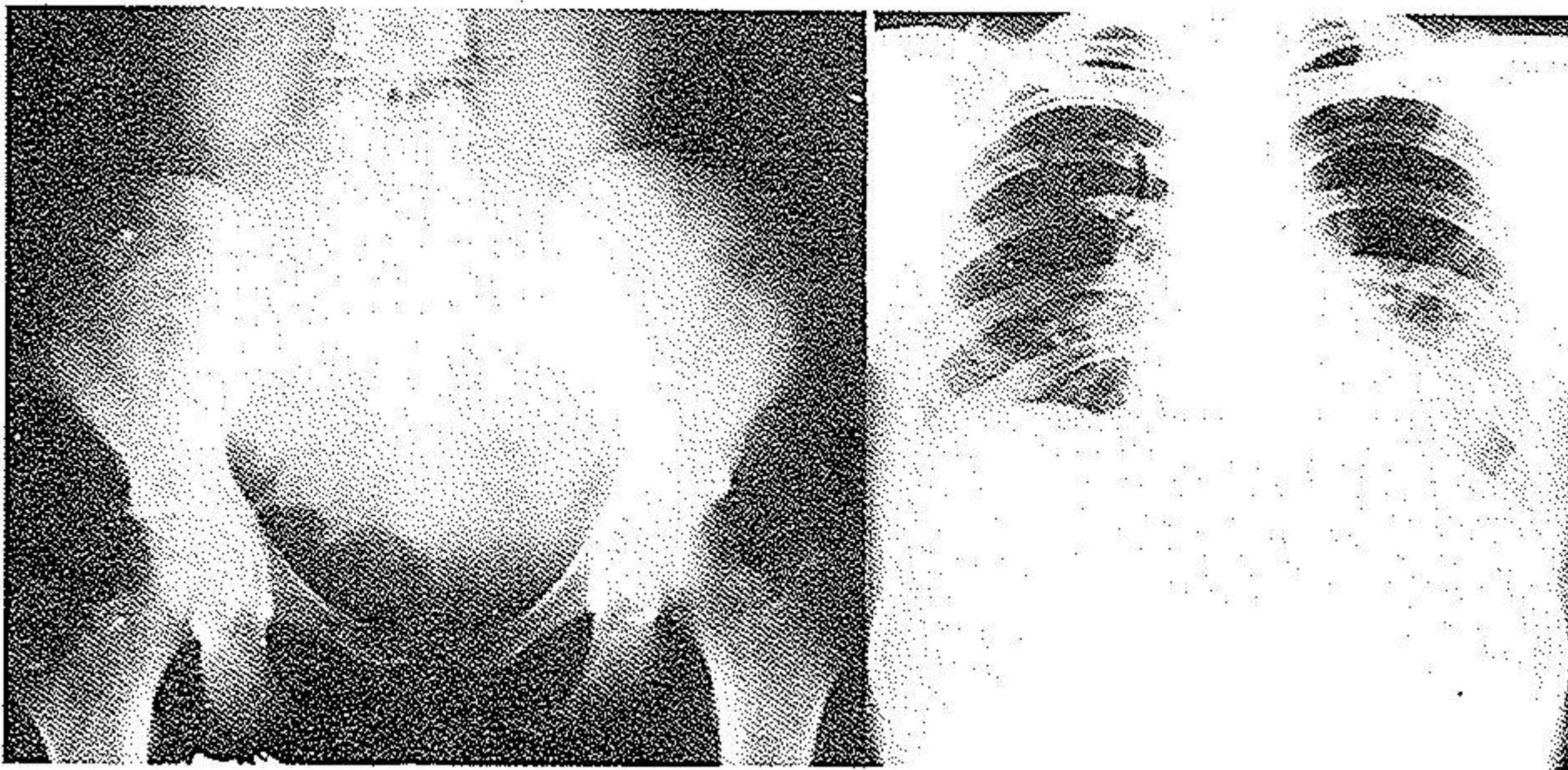


Fig. 5 — Pelvis X-Ray.

Fig. 6 — Chest X-Ray.

The left side mass was incised and a milky fluid was drained. Histological examination of the abscess wall showed abscess wall structures containing lipophagic elements. (Fig.3).

Skull and pelvis X-rays showed osteolytic lesions with sclerosis around them (Fig.4 A,B). The same lesions were seen in the right pubic bone. (Fig.5) Chest X-ray showed no active lesion. There was a light and irregular lytic

lesion on the eight rib (Fig.6). X-rays of other bones were normal. Colon X-ray was normal.

Biopsy of pubic bone showed osteo-cartilaginous lamina with connective tissue, inflammatory follicular lesion (consisting of giant cells, plasmocytes and lymphocytes), high vascularity with thick capillary walls. (Fig.7)

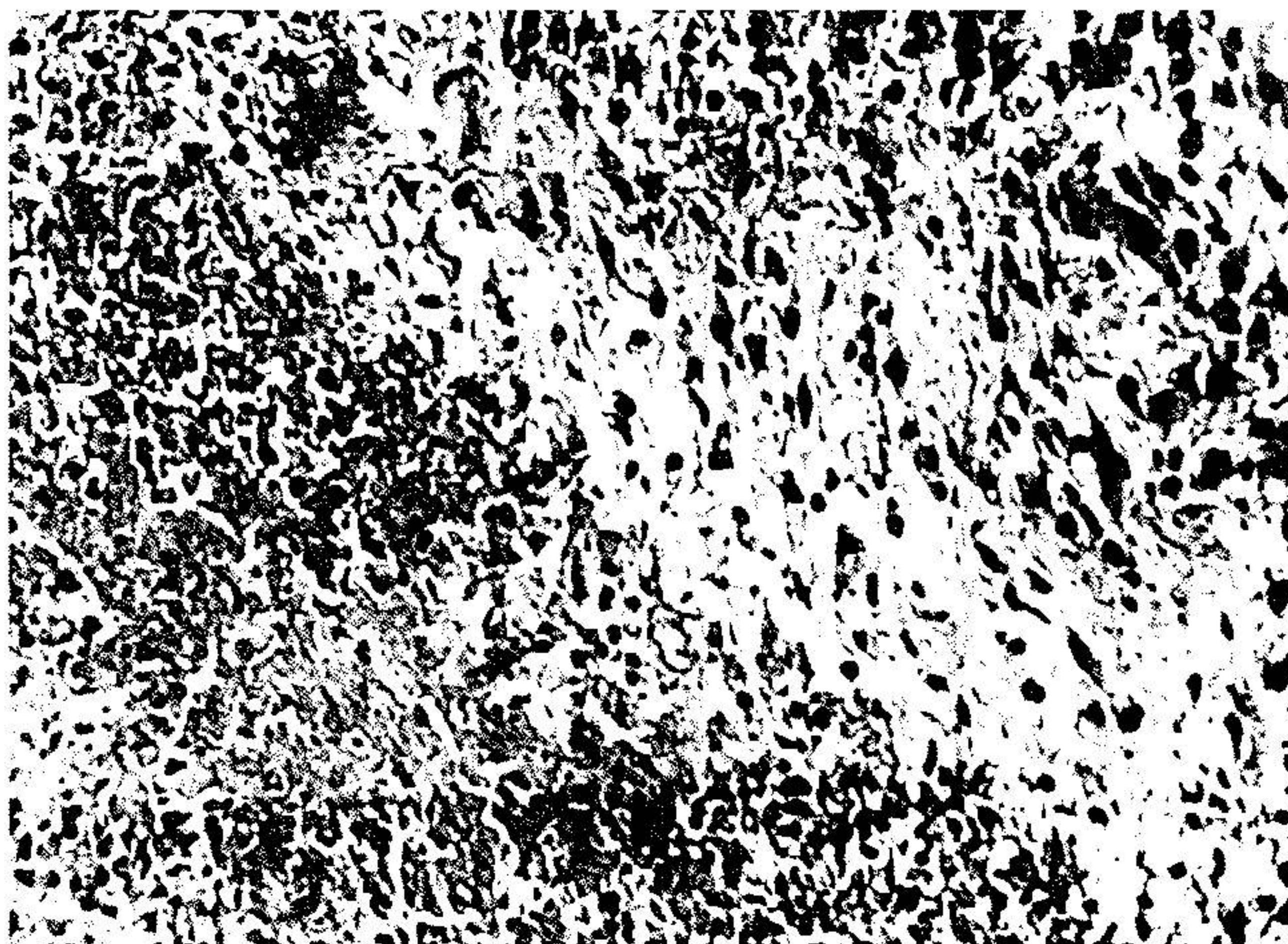


Fig. 7 — Histological aspect of pubic bone.

The diagnosis was based on positive T.B. skin test, high sedimentation rate and the result of biopsies; must be traced the lesion of skull, rib and pubish to a disseminated osseous tuberculosis. (3). The patient was treated with streptomycin and INH. The lesions became smaller after three weeks of therapy and her general condition improved. Sedimentation rate was 10 after the first hour and 24 after the second hour. The patient was discharged, on therapy and recommended to return in six months.

### Discussion

Bone T.B. is almost always the result of hematogenous spread from a

Table 1 — Comparison of our case with cases reported in the literature.

Reference No.	Number of patients	Race	Age	Nutrition & Hygiene	Bones effected by TB.	Fistulisation of cold abscess
1	1	coloured	young adult	insufficient	—	—
8	1	coloured	young adult	insufficient	—	—
12	1	European	79-year-old	insufficient	—	—
14	3	European	—	—	multiple bones	—
3	30	{ 23 coloured 7 European	25 six years & under.	—	—	—
	6	South African children	1½ - 6 years	insufficient	50% in the skull. 50% in tubular bones one case in the sternum	Fistulisation in the leads. Fistulisation in Sternal region
Our case	1	coloured Iranian	young adult	insufficient	skull-pubis ribs	Fistulisation in right groin region from paravertebral cold abscess.

Table 2— Comparison of our case with the cases reported by Cremin.

Reference No	Adenopathy	T.B. Skin Test	Chest X-ray	Biopsy of Bones
4 & 5	66%	66%	50% positive	17% positive
Our case	positive	3+	negative	positive

distant focus. The lesions of multiple bony tuberculous lesions are rare in adults (16). Alexander and Mansuy (1) Edeikan, De Palma, Moskowitz and Smythe (8) each reported a case in young negro adults.

Harrison reported a case in a patient aged 79. He noted that primary infection may occur in old age when resistance to tuberculosis is low (12).

Komins reported three cases, which he described confusingly as osteitis tuberculosa multiplex cystica (14).

Clinton-Thomas and Young reported 30 cases of multiple bone tuberculosis in children; 25 of these children were aged six years and under; only seven were Europeans. (3).

Cremin described six cases in children aged from one-and-a half to six years from The Red Cross War Memorial Children's Hospital Cape Town, South Africa. The skull was involved three times. In one case in which the sternum was involved an abscess burst through the skin. The lesions of multiple bone tuberculosis in children and in adults appear most commonly in coloured races. They probably do not have resistance to the primary infection, particularly if they are malnourished (4-5).

The lesions may be silent and asymptomatic, and they have a chronic indolent course. The lesion of skull may penetrate the skull into the dura (T.B. Meningitis) (11). Because of the rarity of T.B. osteopathy, we decided to compare our case with the cases reported in the literature (Table I).

In addition we have compared our case with the 6 cases reported by Cremin; we have no pulmonary lesions, but we have a positive result of biopsy of the pubis bone and adenopathy in the right groin with fistulisation and positive T.B. skin-test (Table II).

### Summary

A rare case of tuberculosis of many bones (skull, ribs and pubis) is described. There was also paravertebral cold abscess with fistulisation opened to groin region; no lesions were seen in lungs, urinary or gastrointestinal tracts. The response to medical treatment was favourable.

### Résumé

Un cas bien rare de tuberculose osseuse multiple, atteignant le crâne, les côtes et le pubis est présenté. Il y avait en outre un abcès froid paravertébral avec fistulisation de la région inguinale. Il n'y avait pas de lésions viscérales concomitantes dans les poumons, appareil urogénital ou digestif. La réponse thérapeutique fut excellente.

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