

Tuberculosis of the Skull Mimicking Multiple Myeloma

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SUMMARY

There is a resurgence of tuberculosis globally but lesions affecting the skull are rare. Cases reported are of single, focal lesions as seen on plain x-rays. We report a 34 year-old patient with tuberculosis of the skull where multiple punched out lesions are seen, mimicking that of multiple myeloma.

KEY WORDS:

Tuberculosis, skull, mimicking, multiple myeloma

INTRODUCTION

Tuberculosis involving the skull, though rare, is still being reported in endemic areas, especially in Asia. These are usually solitary, focal, lucent lesions seen clinically and on plain x-rays. Diagnosis does not pose a problem. When multiple punched out lesions are seen, they mimic multiple myeloma and may lead us on a wrong diagnostic pathway.

CASE REPORT

A 34 year-old female was referred to our hospital for a swelling over the scalp. X-rays of the skull had shown multiple punched out lesions and was reported by a radiologist as highly suggestive of multiple myeloma.

On further questioning, the patient said that the swelling had been present for 4 years. It had slowly grown in size but was not painful. Over the 4 years, she had been having headaches and giddiness on and off. She had visited a provincial government clinic on many occasions but no one had seen the swelling on the scalp which was covered by her hair. Her blood pressure had been recorded as normal and she was routinely prescribed with analgesics. Three months before coming to us, she finally showed the swelling to the doctor, for which an x-ray was taken. Multiple myeloma was suspected when the punched out lesions were seen. Serum for protein electrophoresis and urine Bence Jones protein was sent to the state capital but took 2 months for the report to come back as negative. It was then that the patient was referred to us.

On examination, the patient was generally well. The swelling was over the right parietal region, just above the hairline. It was 4x4 cm, soft and cystic. The skin was slightly red but not warm and it was not tender. Plain x-rays of the skull showed multiple punched out lesions (Figures 1 and 2).

The initial blood investigations were normal. The Hb was 11.1 g/dL, WBC $9.3 \times 10^9/L$ with the lymphocytes at 26.9%.

The ESR was 20 mm in first hour and Mantoux test was less than 10mm. Sputum AFB sent three times was also negative. Chest x-ray was clear.

An incisional biopsy was then decided upon. At the surgery, the gross appearance of the swelling was a transparent, gel-like material with streaks of whitish fibrous tissue laced across it. Histopathological examination reported it as: "multiple areas of epithelioid cell collections and scattered Langhan multinucleated giant cells. An area of necrosis is seen. Scattered mature lymphocytes and plasma cells are noted. No malignant cells seen. Special stains for acid fast bacilli and fungal bodies are negative. The picture is one of chronic granulomatous inflammation consistent with tuberculosis."

Anti-tuberculosis therapy was started and the patient has been well on follow-up.

DISCUSSION

There is a resurgence of tuberculosis in the world. In Africa and developed Western countries, the increase is due mainly to HIV and migration. It is still endemic in many Asian countries and two thirds of cases originate from the continent¹. Even in endemic areas, tuberculosis involving the skull is rare^{2,3}. We reviewed three series of skull tuberculosis published in the literature; Raut⁴ reported 42 cases, Diyora² 11 cases and Patankar⁵ five cases. In each of these reports, the involvement of the skull, as shown on plain x-rays, was of a single lucent lesion.

Our patient had multiple punched out lesions and these resembled that of multiple myeloma. Some delay was engendered while waiting for the results of the serum electrophoresis and Bence Jones proteins. It was when these were negative that we proceeded to biopsy the lesion which was suggestive of tuberculosis. We note there is no confirmatory evidence of the presence of *Mycobacterium tuberculosis*. The acid-fast stains were negative, the ESR was only 20mm in first hour and the Mantoux was < 10 mm. The histopathological findings were compatible with tuberculosis and that she responded to anti-TB treatment is supportive of the diagnosis.

CONCLUSION

Tuberculosis of the skull can involve the skull and appear as multiple punched out lesions mimicking those of a multiple myeloma. Awareness of this will help to prevent a delay in diagnosis.

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Fig. 1: AP view of the skull showing punched out lesions.



Fig. 2: Lateral view of the skull.

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