# Sarcoidosis – mimicking tuberculosis histologically – a case report

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## Introduction

Cutaneous sarcoidosis may have an extremely heterogeneous clinical presentation, making it the 'great imitator'. Consequently, the diagnosis can be difficult and histopathology plays an important role in the diagnosis. The histopathologic hallmark of sarcoidosis is the presence of dermal infiltrate of non-caseating epithelioid cell granulomas devoid of prominent lymphocytic cuff, in the affected tissues and organs. But rarely tuberculoid granulomas and central necrosis are reported and tend to imitate other diseases histologically. Here we present a case which clinically and histologically mimicked cutaneous tuberculosis, but later confirmed as sarcoidosis.

## Case history

58 year old female presented with progressively worsening alopecia and asymptomatic plaques over face, ear lobes and upper trunk for 3 years duration. She denies having any respiratory, joint or eye symptoms. During the first two years, she was evaluated at a Dermatology unit and the skin biopsies have favoured the diagnosis of cutaneous tuberculosis. She was treated with two courses of anti-TB treatment without a response.

Examination revealed scarring alopecia involving fronto-parietal area of scalp with an active erythematous border and multiple erythematous to skin colored plaques over face, nose, ear lobes and upper trunk. She also had generalized non-tender lymphadenopathy.

Repeat skin biopsies revealed multiple epithelioid granulomas with a lymphocytic cuff and central necrosis favouring cutaneous tuberculosis. Since she was adequately treated for tuberculosis without any response, she was subjected to a lymph node biopsy which revealed non-caseating naked granulomas typical of sarcoidosis.

Fungal cultures, TB cultures and special stains like Ziel-Neelsen, PAS were negative. High ACE levels and urinary calcium levels, a negative Mantoux and QuantiFERON-TB Gold test, HRCT and bronchoscopic evidence of pulmonary involvement favoured the diagnosis of sarcoidosis.

She showed an excellent response to high dose oral corticosteroids and topical steroids. She is in remission for the last 6 months and is being followed up for monitoring of recurrences and systemic manifestations.

## Discussion

Sarcoidosis is considered as the ''Great Imitator" in Dermatology, for its diverse cutaneous presentations and multi organ involvement, mimicking variety of disorders like tuberculosis, leprosy, discoid lupus erythematoses, lymphoma etc. Clinical manifestations like papules, nodules and plaques can be non-specific, dictating a biopsy, leaving the differential diagnosis resting upon the histopathological findings.

The histopathologic hallmark of sarcoidosis is non-caseating epithelioid granulomas, usually surrounded with a sparse or absent lymphocytic infiltrate (naked granulomas). However a range exists within the histologic spectrum of sarcoidosis, from the characteristic naked granulomas to unusual tuberculoid granulomas, leaving the clinician in further disarray[1].

This case perfectly illustrates the dilemma of diagnosing sarcoidosis, when clinical manifestations and histology mimics tuberculosis, leading to a delay in proper diagnosis and treatment. The skin biopsy histology of this female, repeatedly pointed towards tuberculosis, as it had "tuberculoid granulomas with central necrosis" warranting for two courses of anti TB treatment with negative results.

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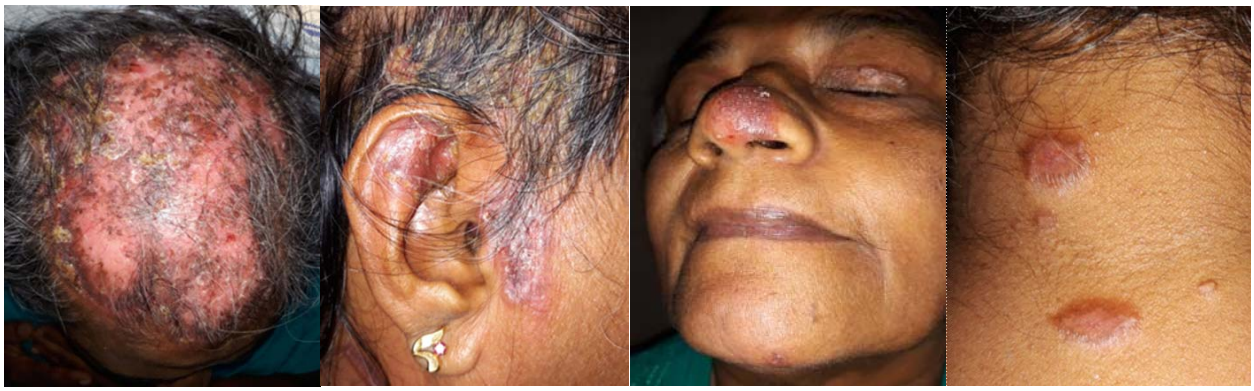
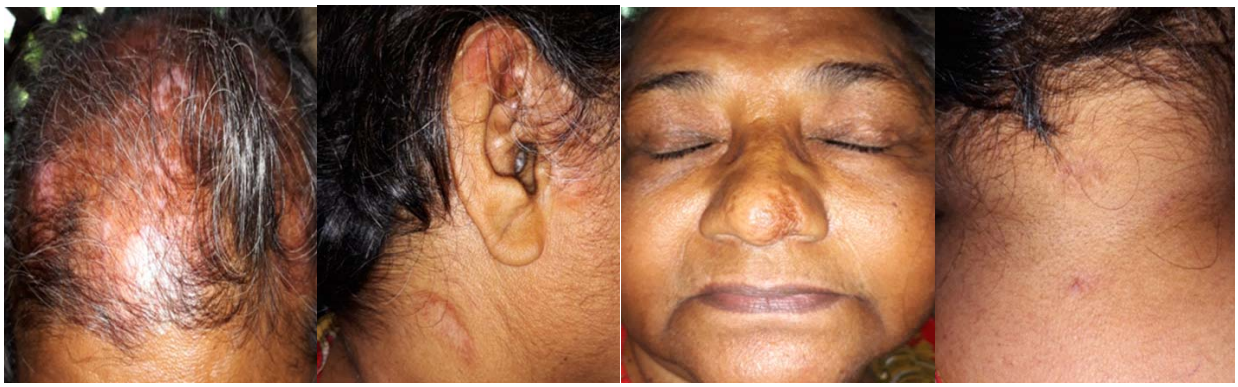
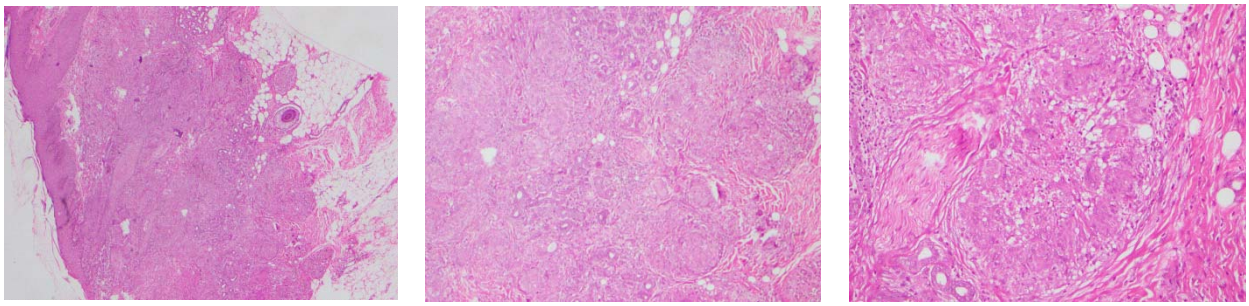


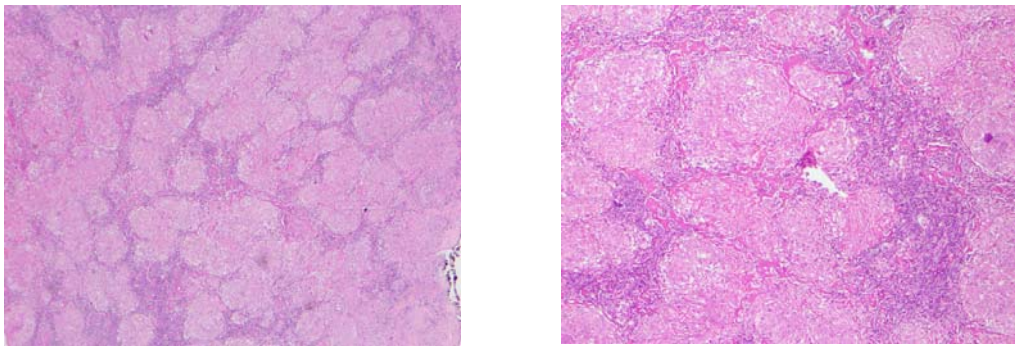
*Before treatment*



*After treatment*



*Skin biopsies showing tuberculoid granulomas with central necrosis*



*Lymphnode biopsy showing typical naked granulomas*

But the subsequent biopsy from the lymph nodes revealed typical naked granulomas. This points to the importance of acknowledging the less common histological variations of sarcoidosis such as,

1) The dense lymphocytic infiltrations can occasionally surround non-caseating granulomas (tuberculoid granulomas) in sarcoidosis as seen in tuberculosis[2].
2) Necrosis is not usually seen in granulomas of sarcoidosis but central fibrinoid necrosis has been reported[3].
3) Asteroid bodies and Schaumann bodies may be seen in multinucleated giant cells but are not specific for sarcoidosis and may occur in other granulomatous reactions including tuberculosis[4].

When the diagnosis is doubtful, the countries with high prevalence of TB like ours, will benefit from a multidisciplinary approach with the chest physicians to decide on Anti-TB treatment verses steroids or concurrent treatment with ATT and steroids[5].

Since sarcoidosis can imitate tuberculosis clinically as well as histologically, we wish to emphasise on the importance of high clinical suspicion, careful and repeated histological evaluation, screening for other system involvement with multidisciplinary approach for accurate diagnosis and treatment.

**References**

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