

## Case Report

# Hodgkin's Disease Masquerading as Granulomatous Lymphadenitis on FNAC

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### Abstract

*Epithelioid granulomas in association with malignant solid tumours and lymphomas are well documented in surgical pathology literature. The presence of granulomas does not pose a diagnostic dilemma when the malignant features are overt. But in rare instances the epithelioid granuloma response may be so florid as to obscure the underlying diagnosis resulting in misdiagnosis.*

*We report two cases of Hodgkin's disease mimicking granulomatous lymphadenitis on cytology.*

*We report these cases to draw attention to diagnostic problems caused by granulomas in FNA cytology.*

*Key words: Hodgkin's disease, Granulomatous lymphadenitis, FNAC*

### INTRODUCTION

Fine needle aspiration cytology (FNAC) has a well established role as the first line investigative modality in the evaluation of lymph node enlargement. On FNAC significant numbers of cases are diagnosed as granulomatous lymphadenitis. Further investigation helps to categorize granulomatous lymphadenitis into inflammatory conditions or malignancy. Granulomas are known to associate with carcinomas (4.4%), Hodgkin's disease (13.8%), NHL (7.3%), Seminomas (50%) and sarcomas (0.4%).<sup>[1,2,3]</sup> We report 2 cases of Hodgkin's disease mimicking granulomatous lymphadenitis on cytology.

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### MATERIAL AND METHOD

Routine FNAC was performed on 2 patients presenting with enlarged cervical lymph node. H&E, MGG and ZN stain for AFB were done. Histopathological examination of lymphnode was done in both cases.

### CLINICAL SUMMARY

Case One. 60 year Male presented with history painless enlargement of right cervical lymph node of 2 weeks duration. No History of fever, cough or weight loss. On examination there were multiple small lymph nodes in right cervical region, largest measuring 2X1 cms. No other significant lymphadenopathy or hepatosplenomegaly seen.

Case Two. 11 year male child known case of Hodgkin's disease presented with generalized weakness and cervical swelling. Patient was treated with chemotherapy 4 years back. On examination there were multiple matted groups

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of lymph node on both sides of neck, axilla and inguinal region. Mild hepatosplenomegaly seen.

## RESULT

On cytology both cases showed lymphoid cells, plasma cells, histiocytes, clusters of epithelioid cells and tangles of degenerated cellular material (Fig1&2). Occasional mononuclear

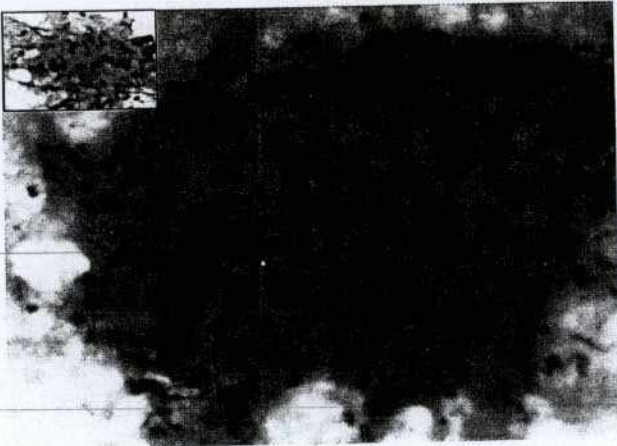


Fig1. Cytology smear of Case 1 showing cohesive cluster of lymphoid cells & histiocytes. Inset showing well formed epithelioid cell granuloma (H&E x 400)

cells with indistinct nucleoli are seen. In addition second case showed few multinucleated giant cells. However no definite R-S cells seen. ZN stain showed no AFB. Provisional diagnosis of granulomatous lymphadenitis was given and biopsy was advised for definitive diagnosis.

On histopathology examination both cases showed features of Hodgkin's disease with typical RS cells. Multiple epithelioid cell granulomas, eosinophils and plasma cells were observed (Fig 3). Second case showed chemotherapy induced changes such as degenerated cells and necrosis.

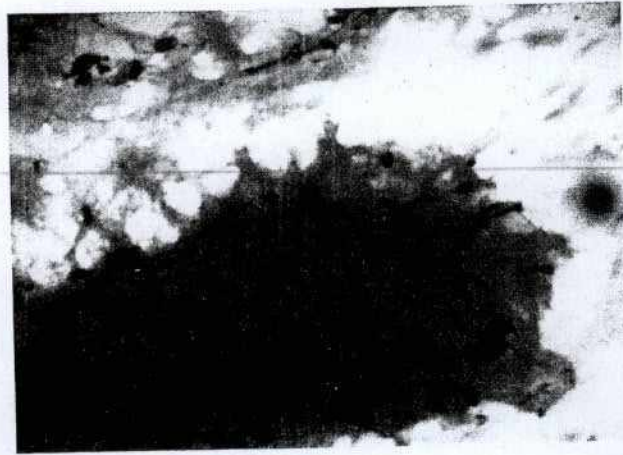


Fig 2. Cytology smear of case 2 showing tangles of degenerated lymphoid cells and histiocytes (H&E x 400)

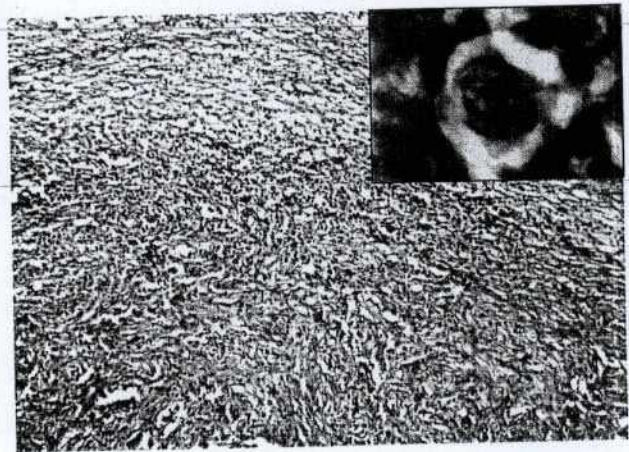
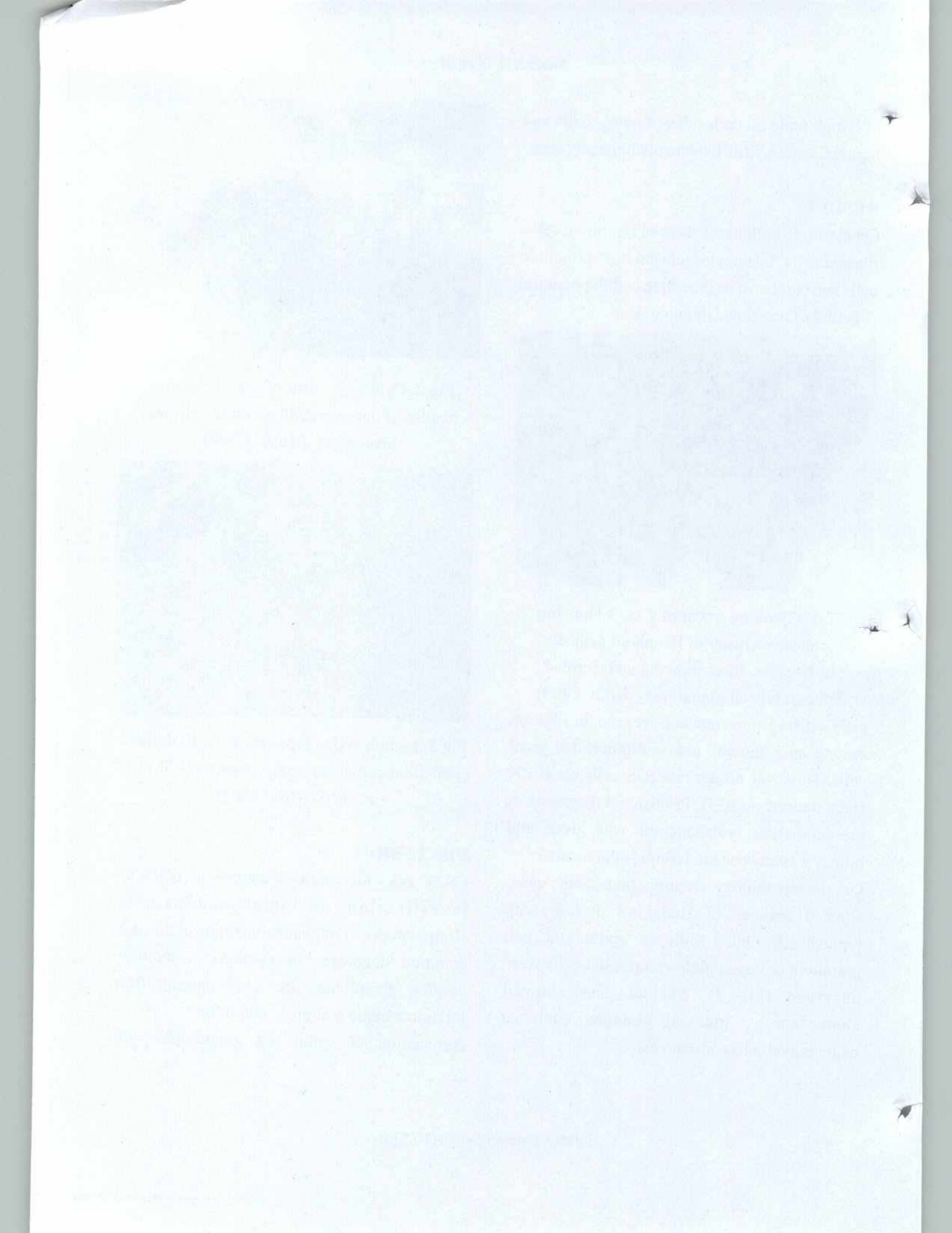


Fig 3. Lymph node biopsy showing ill defined epithelioid cell granuloma. (Inset show Typical RS cell) (H&E x 400)

## DISCUSSION

FNAC is a widely utilized diagnostic tool in the investigation of lymphadenopathies. Granulomatous lymphadenitis is one of the most common diagnoses in cytology. Conditions causing granulomas are wide ranging from inflammatory to malignant condition. Association of epithelioid granulomas with



Hodgkin's disease, Non Hodgkins lymphoma, multiple myeloma, and keratinizing squamous cell carcinoma is described in the literature.<sup>[4,5,6]</sup>

Granulomatous inflammation in lymph node draining carcinomas is also a recognized phenomenon. Such phenomena are reported in pulmonary small cell carcinoma, malignant melanoma, papillary thyroid carcinoma, gastric carcinoma, rhabdomyosarcoma.<sup>[7,8,9,10]</sup>

Granulomatous response has been suggested to be either a response to necrotic material or an immunological T cell mediated hypersensitivity reaction to cell surface antigen.

A confident diagnosis of Hodgkin's disease on FNAC can only be made in the presence of typical RS cells in a background of lymphocytes and reactive cells. In our case exuberant granulomatous response and the absence of diagnostic cells had lead to diagnostic dilemma.

In Hodgkins disease insufficient clinical details, scanty cellularity, granulomas and absence of RS cells may be diagnostically misleading.

In the context of granulomatous disorder the possible etiology is wide and the use of FNAC with biopsy and other ancillary tests (microbiological, immunohistochemical, radiological, biochemical and special staining technique) is useful for obtaining a definitive diagnosis.

### CONCLUSION

Malignancy associated with granulomas and tumor cells mimicking epithelioid histiocytes may be difficult to diagnose accurately on FNAC. The cytological differential diagnosis of a granulomatous process should include

malignant neoplasm. In selected cases excision biopsy may be required for definitive diagnosis.

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