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Original Research Paper

Pathology

STUDY OF CORRELATION BETWEEN GRANULOMTOUS LESION ON FNAC AND AFB POSITIVE TB CASES

Dr Rina Kumari	Tutor/ Senior Resident Department of Pathology, J L N medical college Bhagalpur
Dr Dhanesh kumar*	Tutor Department of Pathology J L N medical college Bhagalpur *Corresponding Author
Dr R .K. Mishra	Professor Department of Pathology J L N medical college Bhagalpur

ABSTRACT Tuberculosis is the commonest infectious disease in the developing world. Many diagnostic tests are devised for its detection including direct smear examination. This study was designed to corelation b/w AFB positive and patients diagnosed to have granulomatous inflammation on Fine Needle Aspiration Cytology using special stains.

Materials and Methods: A descriptive cross-sectional survey was done on 100 cases of granulomatous inflammation consistent with tuberculosis diagnosed on fine needle aspiration cytology at the Department of Pathology, JLNMC, Bhagalpur.After reporting granulomatous inflammation on giemsa staining of aspirates from FNAC, unstained slides were subjected to special stains, like ZN. Cases positive for AFB on ZN stain were noted down along with their frequency and percentages.

***Results*:** Forty-four cases (62.85%) of AFB positive smears were reported as TB while 26(37.14%) cases were AFB positive were m.tuberculosis negative . Cervical lymph nodes were the most commonly involved site (60%) and males(60%) were affected more (40%) than females. Most cases of AFB-positive smears were associated with epitheloid granuloma wth caseation necrosis (60%)followed by only caseous necrosis(30%)andepitheloid granuloma(10%).

Conclusion: Special stains should be done on all granulomatous inflammation cases seen on FNAC for confirmation of TB .

KEYWORDS : FNAC, Granulomtous,AFB Positive TB

INTRODUCTION

TB still represent a threat challenge to humanity .India has the highest burden of TB in the world account for nearly 1/5 of global burden of disease.In india extrapulmonary TB comprises 20% of all TB cases.Lymph node involment is the most common extrapulmonary manifestation.

METHOD AND MATERIAL

The Study was conducated at JLNMC Bhagalpur .Sample size was 100 and duration of study was 4 month from1-9-2018 to 31-12-2018. Hundred cases were detected as granulomatous inflammation in giemsa staining of aspirates from FNAC. Granulomatous lesions were grouped into 3 categories . A working diagnosis was arrived at by analysis of history, clinical examination and FNAC and AFB stainig.

RESULT

Granulomatos lesion- 100

AFB positive cases- 70(44 cases M.TB positive and 26 cases M.TB negative).

AFB negative cases- 30

Cytological smear of tuberculous lymphadenitis were grouped into 3 categories.

Epitheloid granuloma with necrosis- 60%
Only necrosis no granuloma- 30%
Epitheloid granuloma without necrosis- 10%

Zn stained smear were used for screening and grading of af bacteria.

1+ - smear with occasional bacilli
2+ - smear with single scattered AFB
3+ - smear with large no of bacilli arranged in bundle.

Gender wise distribution granulomatous lesion

Female- 60% , **Male**- 40%

Agewise distribution of granulomatous lesion

1-10yrs- 3%
11-20yrs- 11%
21-30yrs- 44%
31-40yrs- 31%
41-50yrs- 8%
51-60yrs- 2%
61-70yrs-0
71-80yrs- 1%

Distribution of lesion according to site of fnac

Cervical lymph node- 60%
Supraclavicular lymph node-20%
Axillary lymph node -10%
Inguinal lymph node- 5%
Preauricular lymph node-3%
Skin and subcutaneous lesion-2%

DISCUSSION

Fnac is a simple and economic procedure for diagnosis of TB compared with core needle biopsy /excision biopsy and also during the follow up of patients with antiTB T/tment .Accurate and timely diagnosis together with effective TB T/t ment is the mainstay of tb care.A confirm diagnosis of TB can only be given an isolation of MTB and DNA sequence of bacteria in aspiraton .Fnac is a very useful and reliable test in case of extrapulmonary TB. Granulomatous inflammation is common presentation of tb .Second most most common infectious cause of granulomatous inflammation is fungus.Similar study was done by departmet of pathology .In the present study we tried to correlate b/w granulomatous lesion and acid fast positive tubercuous cases.Blind fnac can approach safely in the superficial lesion.In our studys most of the cases from lymph node .Cervical lymph node was the most common site followed by supraclavicular lymph node.Similar study was performed by Majeed muhamma mudassar et al.

In our studies male gender more affected then female.Similar study was done by Bezabih et al.

In my study granulomatus lesion are divided into 3 category .

Epitheloid granuloma without necrosis

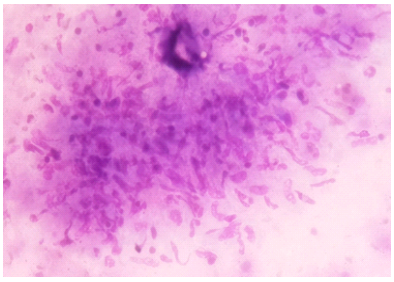
Epitheloid granuloma with necrosis
Necrosis without epitheoid granuloma

Similar study was done by Afrose Ruquiy et al, Bharti Arati et al.On the basis of appearance, blood mixed aspirate were noted more commonly in 80% cases followed by purulent or pus material in 10% cases and caseous or cheesy material in 10% of cases whereas ,HemIataha et al observed blood mixed aspirates in 87.3% andpurulent or cheesy material 12.7% cases.Our studied most common age group affected 21-40 yrs(75%) followed by 11-20yrs >41-50yrs >1-10 yrs >51-60 yrs(2%).

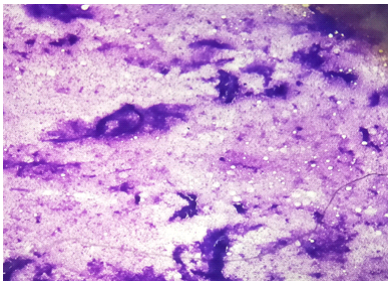
CONCLUSION

Fnac is a a sensitive ,simple, soft minimally invasive procedure to diagnosed tuberculous lymphadenitis .Study of both fnac and Zn staining for afb improve the diagnostic yield .If Fnac is supplemented with special stain like ZN staining GMS and PAS. It may help to differentiate b/w many infective causes of granulomatous inflammation.

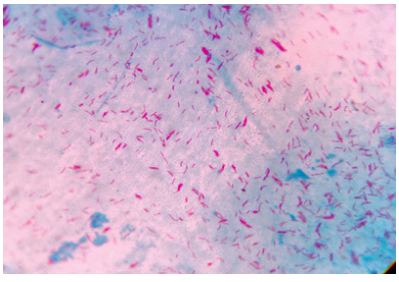
Figures



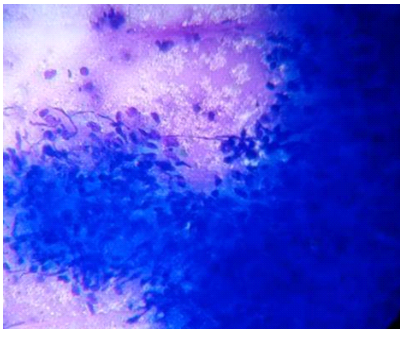
EPITHELOID GRANULOMA



NECROSIS WITHOUT EPITHELOID GRANULOMA



ACID FAST POSITIVE M.TUBERCULOSIS BACTERIA



EPITHELOID GRANULOMA WITH NECROSIS

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