International Journal of Science and Research (IJSR)
ISSN: 2319-7064
Impact Factor 2024: 7.101

Mycosis Fungoides in Skin Nodule

Dr. Osho Vishwa Mohan

Department of Pathology in a Tertiary Care Hospital

Abstract: ***Aim: To highlight the cytological features of mycosis fungoides and evaluate the diagnostic utility of fine-needle aspiration cytology (FNAC) in suspected cases. Objectives: To describe the FNAC findings in two clinically suspected cases of mycosis fungoides and emphasize the importance of cytology supported by immunohistochemistry in early diagnosis. Discussion: Mycosis fungoides is the most common primary cutaneous T-cell lymphoma but remains diagnostically challenging on cytology due to its rarity and morphological variability. FNAC smears in both cases showed atypical medium-to-large lymphoid cells with dense chromatin, irregular nuclear contours, and prominent nucleoli. Immunohistochemistry revealed positivity for CD3 and CD45, confirming T-cell lineage. Awareness of these cytomorphological features, along with clinical correlation, is crucial to avoid misdiagnosis. Early recognition on FNAC can facilitate timely management and improve patient outcomes.***

Keywords: Mycosis fungoides; FNAC; Cutaneous T-cell lymphoma; Cytology; Immunohistochemistry

1. Introduction

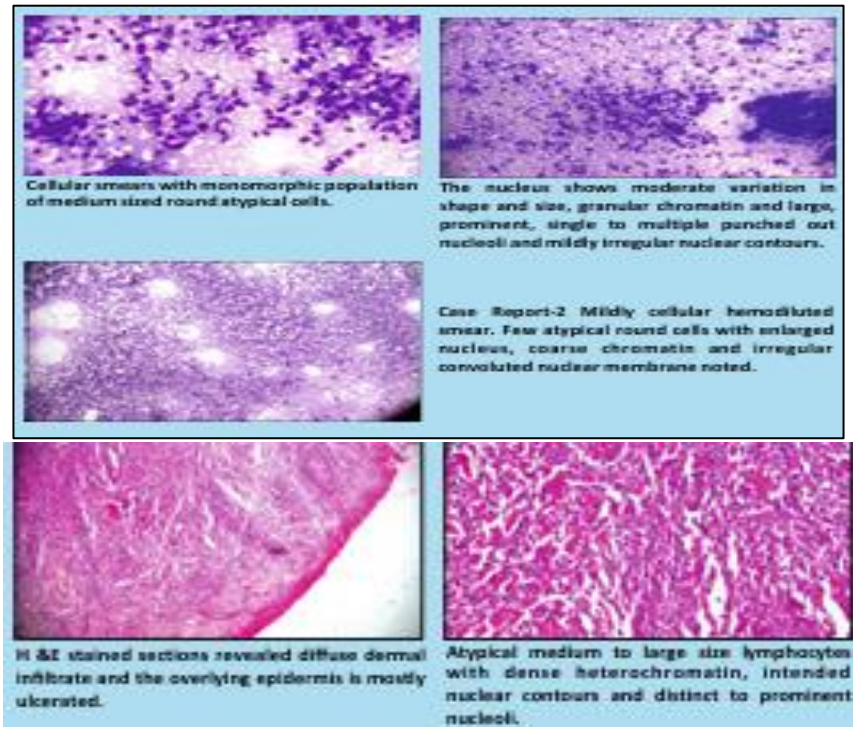
Mycosis fungoides (MF) is a rare yet the most common form of primary cutaneous T-cell lymphoma, accounting for approximately 44% of cutaneous lymphomas.[1] It predominantly affects adults with a male predominance (male:female ratio ≈ 2:1). The disease usually has an indolent course, evolving slowly over several years, and may present with a variety of clinical manifestations including pruritic patches, plaques, or nodules. Cytological diagnosis can be challenging due to its varied morphology and rarity, often leading to a low index of suspicion. Very few cases diagnosed on fine-needle aspiration cytology (FNAC) have been reported in the literature.

2. Objectives

To present the cytological findings of mycosis fungoides and highlight the role of FNAC in its diagnosis.

Case Report 1
A 70-year-old male presented with multiple raised lesions all over the body, intermittent fever, weight loss, and bilateral peripheral lymphadenopathy of one month's duration. Hematological investigations revealed hemoglobin of 11.7 g/dL, with all other parameters within normal limits. Ultrasonography of the whole abdomen showed no abnormality.

Case Report 2
A 21-year-old female presented with dark, raised, pruritic lesions all over the body along with swelling of fingers of both hands for the past 2–3 months. Ultrasonography of the whole abdomen revealed hepatomegaly, measuring approximately 18.2 cm.



Immunohistochemistry showing CD3 positivity

Immunohistochemistry showing CD45 positivity

3. Discussion

FNAC smears in both cases revealed atypical medium-to-large lymphoid cells with dense heterochromatin, irregular nuclear contours, and distinct to prominent nucleoli. Immunohistochemistry showed positivity for CD3 and CD45, supporting a T-cell lineage. Mycosis fungoides is a relatively rare entity, and its cytological diagnosis requires careful evaluation and clinicopathological correlation.

4. Conclusion

FNAC can serve as a useful diagnostic tool in detecting mycosis fungoides in patients presenting with skin nodules. Pathologists should consider this entity when evaluating FNAC smears showing round cell morphology in appropriate clinical settings. A high index of suspicion and early diagnosis on FNAC can significantly impact patient outcomes.

References

[1] Willemze R, Kerl H, Sterry W, et al. EORTC classification for primary cutaneous lymphomas: A proposal from the Cutaneous Lymphoma Study Group of the European Organization for Research and Treatment of Cancer. *Blood*. 1997; 90: 354–371.
[2] Kim YH, Liu HL, Mraz-Gernhard S, et al. Long-term outcome of 525 patients with mycosis fungoides and Sézary syndrome: Clinical prognostic factors and risk for disease progression. *Arch Dermatol*. 2003;139:857–866.