

Diagnostic Role of Bone Marrow Aspiration and Trepine Biopsy in Lymphoma Patients: A Case Study

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ABSTRACT

Purpose: To decide the helpfulness of bone marrow aspiration and trephine biopsy in assessment of the bone marrow in routine hematological practice.

Method: This cross sectional descriptive study was conducted at diagnostic and research laboratory LUMHS Hyderabad during June 2017 to August 2019. 54 patients data was studied thoroughly by categorizing results of bone marrow aspiration and trephine biopsy as negative and positive.

Results: in this case study it was observed that among 54 patients, ratio and rate of bone marrow aspiration and trephine biopsy was classified in 3 grades as positive negative and insufficient. Bone marrow aspiration's positive rate was calculated as 7.4% and in case of trephine biopsy's positive rate was 33.3%.

Conclusion: The review results recommend that both the suction and borer biopsy complete one another. Nourishing anaemias, Hematological Malignancies and Immune Thrombocytopenia can be promptly analyzed by bone marrow aspirate as well as via trephine biopsy.

Key Words: Bone Marrow; Trephine Biopsy; Lymphoma

INTRODUCTION:

Bone marrow BM examination is an important investigation in variation hematological and non-hematological diseases for diagnosis and staging purpose. In Hodgkin and non-Hodgkin lymphoma, BM examination is an important role in primary diagnosis, prognosis and treatment. BM Trephine has a key role in diagnostic features in lymphoma patients due to presence of infiltration pattern distribution and the space occupied. Trephine biopsy is not affected by fibrosis as compared to BM aspirate. The objective of the study is to compare the role of BM aspiration and trephine in lymphoma patients. Basic statistical tools were used for data analysis.

Bone marrow aspiration biopsies are done essentially to allow cytological evaluation yet additionally for immunophenotypic, cytogenetic, molecular genetic, and other specific examinations. Frequently, a borer biopsy is completed as a component of a similar technique. Bone marrow aspirations ought to be completed via prepared people who know about the signs, contraindications, and risks of the technique. They ought to keep a guideline working system. The administrator ought to have made a satisfactory evaluation of clinical and hematological elements to

guarantee both that fitting signs exist and that all significant tests are performed. For the patient's solace and wellbeing, the back iliac peak is for the most part the favored site of goal. Movies of suctioned marrow and, when fitting, movies of squashed particles ought to be made and named. When completely dry, movies ought to be fixed and stained. As a base, a Romanowsky stain and a Perls' stain are required. A cover slip ought to be applied. The bone marrow movies ought to be evaluated and revealed in a methodical way with the goal that nothing of significance is disregarded, utilizing a low power, then, at that point, middle, then, at that point, high power objective. A differential count ought to be performed. An understanding of the discoveries, in the light of the clinical and hematological highlights, ought to be given.¹

Methodology:

This cross sectional descriptive study was conducted at diagnostic and research laboratory LUMHS Hyderabad. Study was done from June 2017 to August 2019. The known cases of Hodgkin and non-Hodgkin lymphoma undergone through both BM aspiration and trephine were included in the study. The findings on BM aspiration and trephine biopsy were evaluated and compared. BM aspiration and trephine results were categorized as positive/ negative and insufficient.

Results:

Fifty four (34 male and 20 females, 7 to 80 years with the average age of 47.7 years) patients of Hodgkin and non-Hodgkin Lymphoma were identified. BM aspiration was positive in 4/54 (7.4%), negative in 43/54 (79.6%) and insufficient in 7/54 (12.9%) patients. Similarly BM trephine was positive in 18/54 (33.3%), negative in 35/54 (64.8%) and insufficient in 1/54 (1.8%). BM aspirate failed to correlate with BM trephine did not contribute to assessment of BM involvement in 39/54 (12.2%) patients. BM trephine gave more positive results as compared to BM aspirates.

Discussion:

Bone marrow goal and borer biopsy complete one another and in many focuses both the examples are gotten simultaneously and from the equivalent site. Bone marrow goal and borer bone biopsy supplement each for bone marrow assessment. Both the systems should be possible all the while as bone marrow suction give better morphology of the cells and bone marrow biopsy give a decent image of the engineering and example of dissemination of cells.

TABLES:

Table 1.1: Gender

Male	Female
34	20
62%	37%

Table 1.2: Bone marrow Aspiration

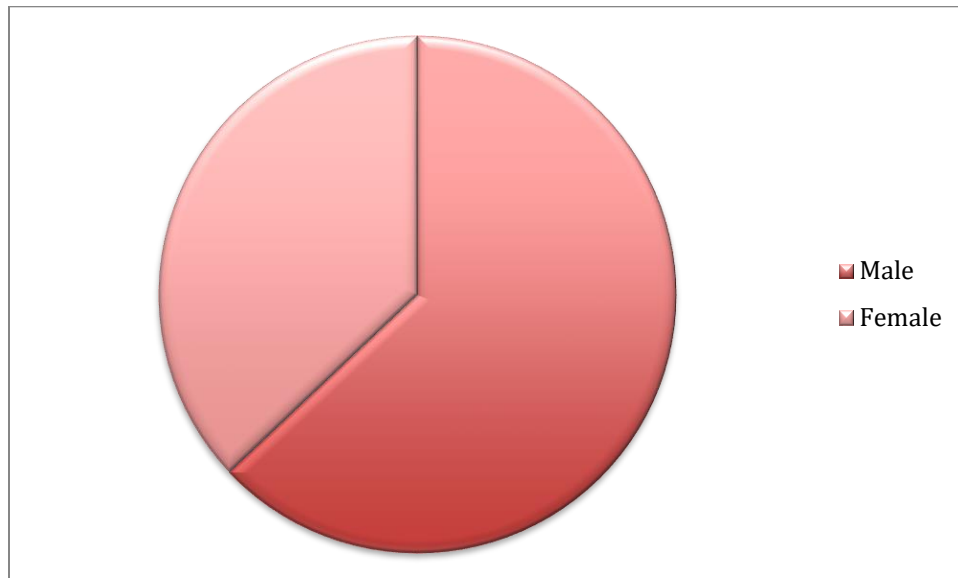
Positive	Negative	Insufficient
7.4%	79.6%	12.9%

¹ Bain, B. J. (2001). Bone marrow trephine biopsy. *Journal of clinical pathology*, 54(10), 737-742.

Table 1.3: Bone marrow trephine

Positive	Negative	Insufficient
33.3%	64.8%	1.8%

FIGURES:



Figures1.1: gender (male and females) involved in study.

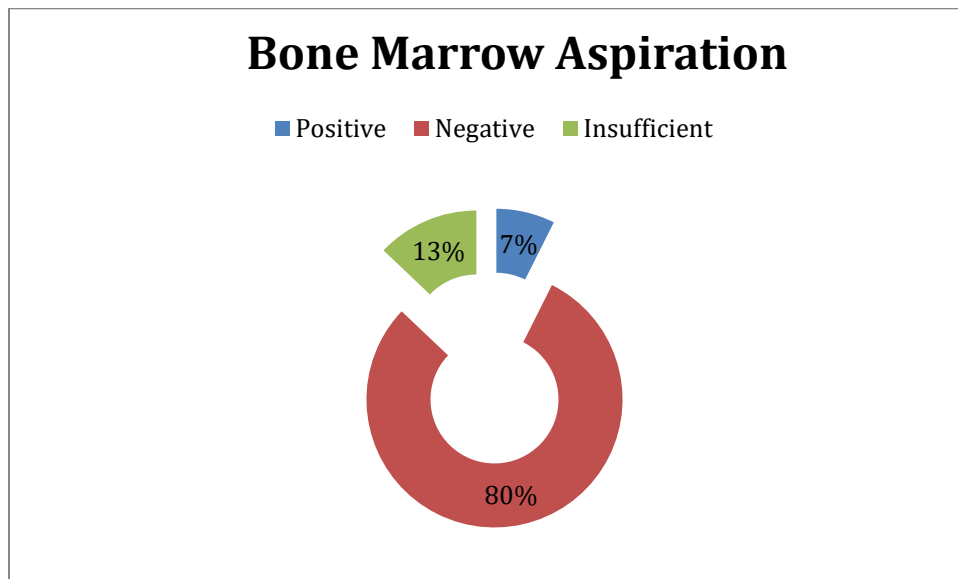


Figure 1.2: Bone marrow Aspiration

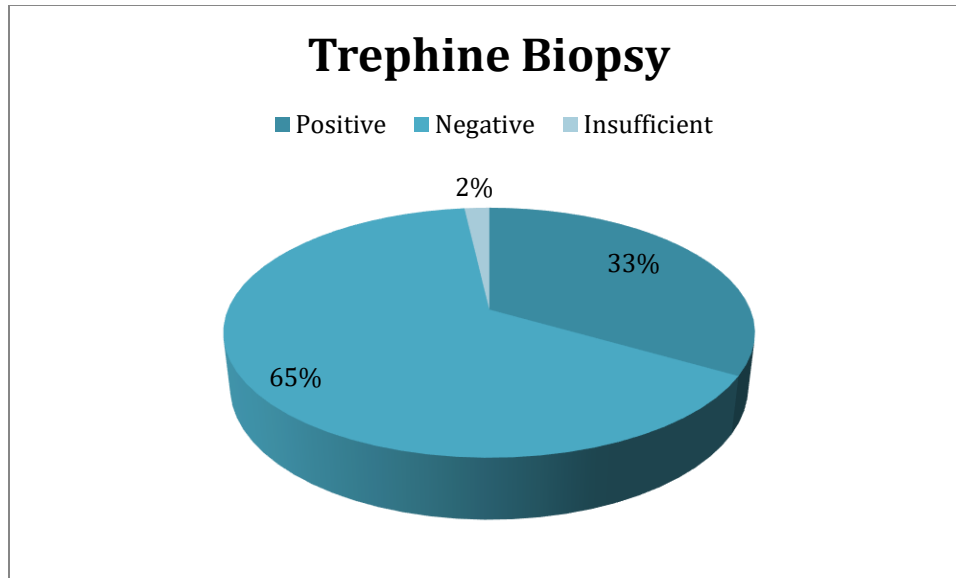


Figure 1.3: Trepine biopsy

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