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Diagnostic Splenectomy: Clinical Profile, Role and Relevance in Diagnosis of Lymphoma

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INTRODUCTION

- **Splenectomy as a diagnostic procedure : last attempt at attaining diagnosis in patients who have been extensively evaluated for their symptoms, and no cause has been detected.**
- **An uncommon procedure: Because of associated short and long-term morbidity and mortality (post-op complications , infections with encapsulated bacterial organisms)**
- **Paucity of data regarding its role and relevance, especially when lymphoma is suspected on bone marrow or FNAC but no definitive histopathological diagnosis possible.**
- **Only few case series, looking for diagnostic splenectomies for pyrexia of unknown origin (PUO)**
- **None of these series have looked at overall diagnostic splenectomies which were done for indications other than PUO - for example - massive splenomegaly, focal splenic lesions, severe cytopenia etc.**

AIMS AND OBJECTIVES

- **Primary end-point:**

- Incidence of lymphoma/ hematological diseases on diagnostic splenectomy specimens.

- **Secondary end-point:**

- Spectrum of lymphomas diagnosed on splenectomy specimens.

- Correlation between pre-operative parameters – clinical, biochemical, and radiological - with outcome

METHOD

- **Retrospective data from CMC Vellore, India.**
- **Total 1165 splenectomies were performed at our center from January 2008- June 2022.**
- **All data was retrieved from hospital electronic medical records, analysed with the SPSS software version 24.0.**
- **We analyzed the clinical profile and outcome of diagnostic splenectomies after excluding**

1.Traumatic splenectomies

2.Therapeutic splenectomies (Immune thrombocytopenia, hemolytic anemia, pre-op known malignancies)

RESULTS

TABLE 1 : Baseline Patient Characteristics (N= 123 diagnostic splenectomies)

Characteristic	Number (%) or median (range)
Age in years	**44 (17- 74)**
Male sex	75 (61)
'B' symptoms	82 (66.7)
Significant Lymphadenopathy (>15mm)	**29 (23.9)**
Pre-surgical spleen size in cm (On imaging)	**20 (11-37)**
Presence of focal lesion in spleen	53 (44.1)
Lymphocytosis (>50%)	13 (10.6)
Neutropenia (ANC < 1500/cmm)	39 (31.7)
Elevated serum LDH	**82 (73.2)**

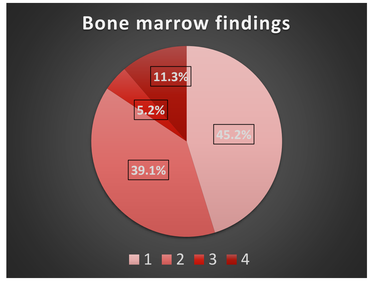


TABLE 2 : Bone Marrow Findings (N =115)

BM Findings	Number (%)
1. Normal	52 (45.2)
2. Malignancy (Mg)/ suspicious of malignancy*	**45 (39.1)**
3. Infection	5 (5.2)
4. Other diagnosis	13 (11.3)

- On univariate analysis none of the pre-operative clinical, laboratory or radiological parameters was predictive of a histopathological diagnosis of lymphoma on the resected specimen.

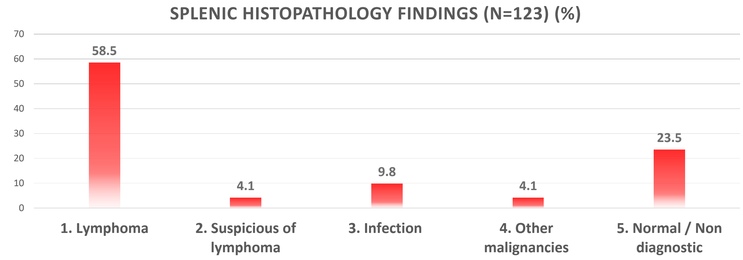


TABLE 3 : Lymphoma subtype on splenic histopathology (n=72)

LYMPHOMA SUBTYPE (ON SPLENIC HISTOPATHOLOGY)	NUMBER OF PATIENTS n =72 (%)
1.**B Non-Hodgkin's Lymphoma (B NHL)**	**48 (66.6%)**
a. Splenic Marginal Zone Lymphoma	26 (36.1)
b. Diffuse large B cell lymphoma	16 (22.2)
c. Splenic Diffuse red pulp B cell lymphoma	01
d. T cell rich B cell lymphoma	01
e. Low grade B NHL (Subtype not available)	04
2. **T Non-Hodgkin's Lymphoma (T NHL)**	**17 (23.6%)**
a. Peripheral T cell lymphoma- Not otherwise specified	04
b. NK T cell lymphoma	04
c. Hepatosplenic gamma delta T cell lymphoma	03
d. T cell large granular lymphocytic leukemia	01
e. T NHL (Subtype not available)	05
3. **Hodgkin Lymphoma**	**06 (7.8%)**
4. Plasmablastic lymphoma	01

CONCLUSIONS

- **Splenectomy has a clear role in the evaluation of diagnostically challenging cases, allowing for histopathological confirmation of lymphoma and further subtyping in a majority of cases.**
- **In this study, clinical/lab/radiological parameters were not predictive of a diagnosis of lymphoma.**

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