

is performed to assess the marrow trephine findings in different stages of the disease.

Material & Methods

Using paraffin blocks of 30 patients with IMF, processed from Sep.1998 to Sep. 2002, 18 patients were males and 12 were females. Three sections were obtained from the original paraffin blocks and stained for H &E, reticulum and Perl's reaction. Trephine biopsies were re-evaluated both subjectively and quantitatively.

Subjective evaluation involves the systemic examination of H & E slides for

1. **Cellularity:** graded as follows^[13,14]
decreased <35%, normal 35-49%, slight Increase 50-59%, moderate Increase 60-89%, marked Increase 90-100%
2. **Megakaryocytic concentration**^[13,14]
decreased <3/mm², normal 3-5/mm², slight increase 6-8/mm², moderate increase 9-14/mm², marked increase ≥15/mm²
3. **Iron content:** after staining the slides for Perl's reaction the results were graded as follows^[15], 0: No iron, 1: Minimal iron, , 2: Slight & Patchy, 3: Moderate & Diffused, 4:

Strong and extensively diffused, Grades 0-1 indicate iron deficiency.

4-Reticulin fibrosis was evaluated as in Ellis et al^[14].

The quantitative evaluation of bone marrow biopsies involved counting the number of megakaryocytes, and blood vessels in one cubic mm using a planimetric method^[16]. Using the Chalkley's point counting method, the amount of hemopoietic tissue was measured as percentage^[9].

Both of the osteoblastic index and the trabecular bone width was measured using an ocular graticule^[17]. Bone marrow biopsies of 30 subjects with normal histology was chosen as a base line data.

Statistical analysis was done using one way ANOVA and t-test, with P value less than 0.05 was considered significant.

Results

The subjective evaluation of trephine biopsies showed that most patients examined have increased cellularity (Table 1).

Table 1: Subjective evaluation of cellularity

Cellularity	No.	Percentage (%)
Reduced	12	40
Normal	4	13.34
Slightly increased	6	20
Moderately increased	5	16.66
Markedly increased	3	10

Megakaryocytes are increased in 76.66% of cases, being markedly increased

in 16.66%. In 20% of cases, clustering of megakaryocytes was recognized (Table 2).

Table 2: Subjective evaluation of megakaryocytes

Megakaryocytes	Evaluation	No. of cases	Percentages (%)
Number	Reduced	4	13.34
	Normal	3	10
	Slight increase	1	36.66
	Moderate increase	7	23.34
	Marked increase	5	16.66
Distribution	Diffuse	21	70
	Cluster	6	20
	Sheets	3	10