INTERLEUKIN-6 IN PATIENTS WITH CLONAL AND REACTIVE THROMBOCYTOSIS

Thesis

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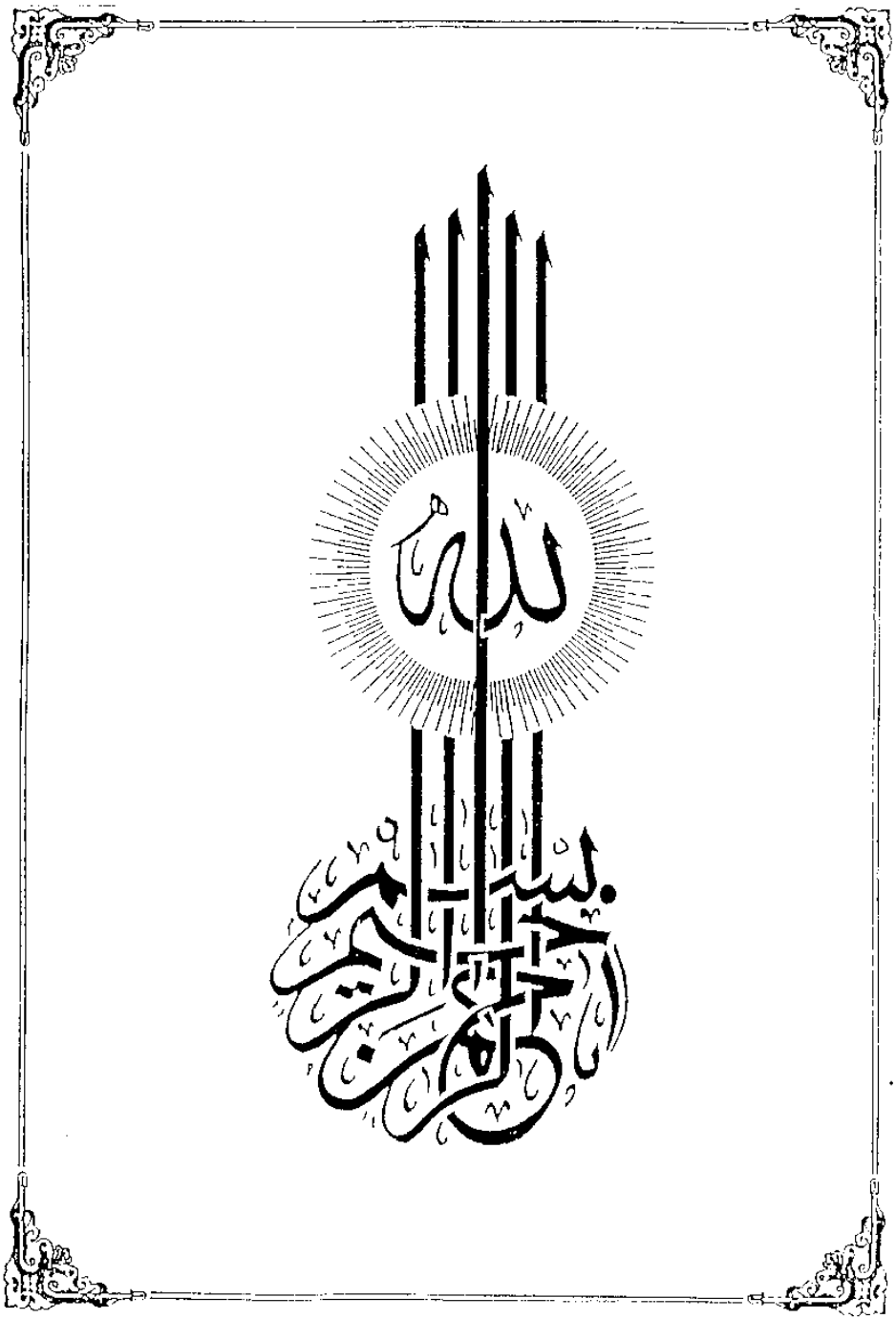
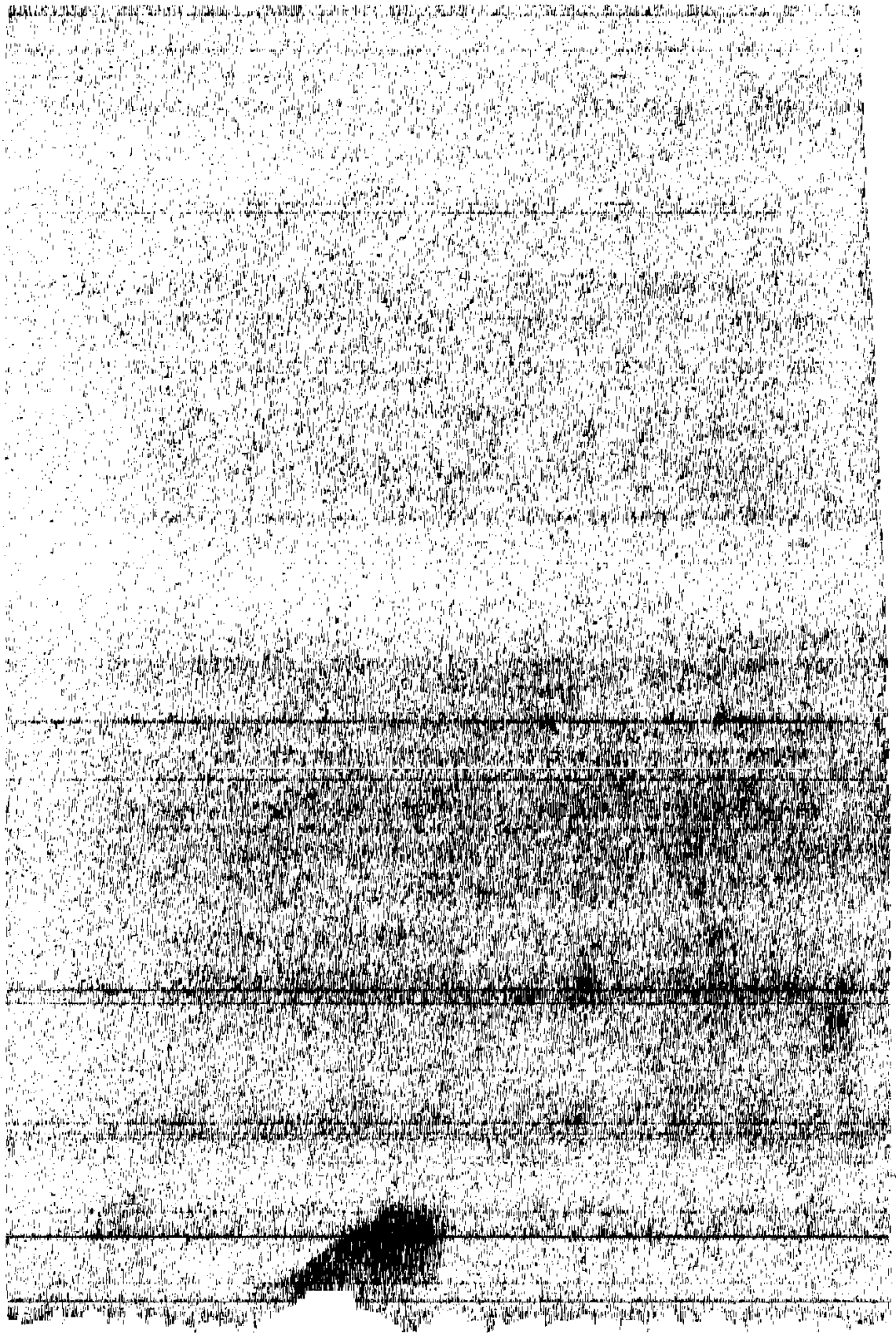
بسم الله الرحمن الرحيم

" وقل رب زدنى علما"





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MQ	Macrophage
MSF	Maturation stimulatory factor
N	Nucleus
NAP	Neutrophil alkaline phosphatase
NK cells	Natural Killer cells
PF4	Platelet factor 4
PFP	Platelet forming protein
PGPMC	Platelet glycoprotein bearing mononuclear cell
Ph	Philadelphia chromosome
PRV	Polycythemia rubra vera
rH-IL-3	Recombinant human interleukin-3
TGF-β	Transforming growth factor-β
TNF	Tumour necrosis factor
TPO	Thrombopoietin

LIST OF ABBREVIATIONS

BFU-MK	Burst forming unit -megakaryocyte
CFU-MK	Colony forming unit-megakaryocyte
CFU-Meg	
C.K.L	C-kit ligand
CML	Chronic myelogenous leukemia
DNA	Deoxy ribonucleic acid
EPO	Erythropoietin
ET	Essential thrombocythemia
G6PD	Glucose 6 phosphate dehydrogenase
GE MM-CFU	Granulocytic, erythrocytic, macrophage, monocyte colony forming unit
gP IIIA, IIb	Glycoprotein IIIA, IIb
HILV-I	Human T-lymphocyte virus-I
IFN	Interferon
IL-	Interleukin
IM	Idiopathic myelofibrosis
LD-CFU-MK	Low density-colony forming unit megakaryocyte
MDS	Myelodysplastic syndrome
Meg-CSA	Megakaryocyte colony stimulating activity
Meg-POT	Megakaryocyte-potentiator
MIP Iα	Macrophage inhibitory peptide Iα, Iβ
MIP Iβ	
M.M.	Multiple myeloma
MPDs	Myeloproliferative disorders

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INTRODUCTION AND AIM OF THE WORK

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Thrombocytosis refers to the presence of an abnormally high number of platelets in circulating blood *(Gordon and Hoffman, 1992)*. It may result from various pathologic and physiologic processes.

The term clonal thrombocytosis, associated with myeloproliferative disorders is believed to be due to autonomous, unregulated platelet production. Reactive thrombocytosis may be related to persistent over production of some thrombopoietic factors acting on megakaryocytes and their precursors which are capable of responding to exogenous growth factors *(Burstein et al., 1990)*.

Thus, it is concievable that if some forms of thrombocytosis are related to over production of growth factors,measurement of serum levels of these factors might provide insight into the etiology of the elevated platelet count. In this regard measurement of IL-6 is suggested to differentiate between the possible causes of thrombocytosis.

C-reactive protein (CRP) is an acute phase reactant produced by hepatocytes. It is believed that, the production of CRP is mediated by IL-6 *(Steel and Whitehead, 1991)*.

AIM OF THE WORK

1. To assess the situation of interleukin-6 among the cytokines affecting platelet formation in patients with myeloproliferative disorders associated with thrombocytosis and in patients with reactive thrombocytosis.

2. To evaluate whether C-reactive protein (CRP) could be a less expensive surrogate for measurement of IL-6 level in these patients.

REVIEW OF LITERATURE