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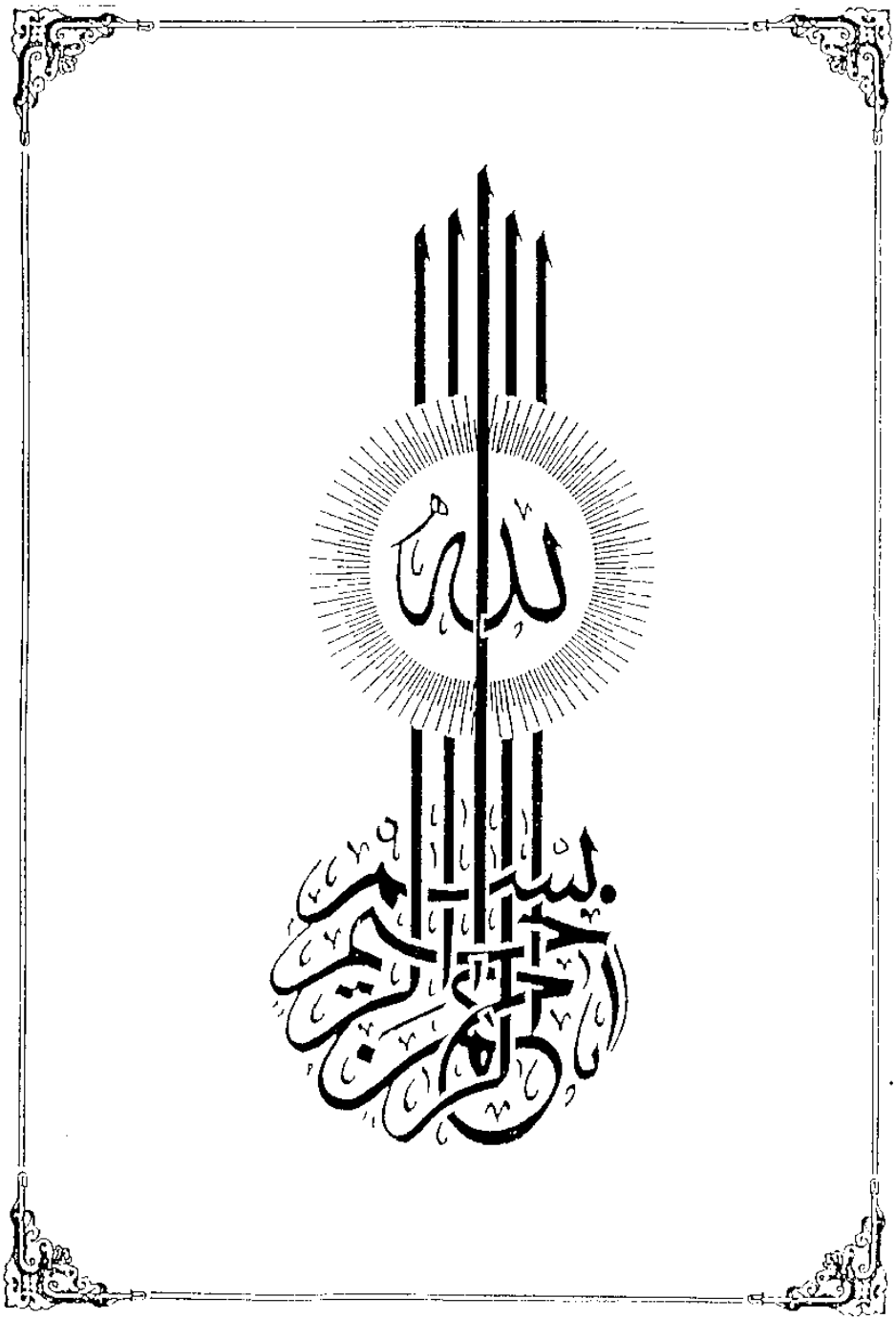

Measurements of Pleural Fluid and Blood, Cholesterol and Lactate Dehydrogenase, for Differentiation Between Transudative and Exudative Pleural Effusion

THESIS SUBMITTED FOR THE PARTIAL FULFILLMENT OF THE MASTERS DEGREE IN CHEST DISEASES

BY

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List of Abbreviations

P.Cholest	:	*Pleural cholesterol*
P.LDH	:	*Pleural lactate dehydrogenase*
P.Prot	:	*Pleural protein*
S.Cholest	:	*Serum cholesterol*
S.LDH	:	*Serum lactate dehydrogenase*
S.Prot	:	*Serum protein*
LDL	:	*Low density lipoprotein*
HDL	:	*High density lipoprotein*
VLDL	:	*Very low density lipoprotein*
LCF	:	*Liver cell failure*
CHF	:	*Congestive heart failure*
RF	:	*Renal failure*
P.Emb	:	*Pulmonary embolism*
TB	:	*Tuberculosis*
SLE	:	*Systemic lupus erythematosis*
RF	:	*Rheumatoid factor*
C_4	:	*Complement number 4*
LE cells	:	*Lupus erythematosis cells*
CT	:	*Computed tomography*

ADA	:	*Adenosine deaminase*
PgE	:	*Prostaglandin E*
ESR	:	*Erythrocyte sedimentation rate*

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Introduction and Aim of the Work

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The clinical recognition of pleural effusion signals an abnormal pathophysiologic state that has resulted in a dysequilibrium between pleural fluid formation and removal.

The focus of the disease, most commonly, is in the lungs and pleura but it can be extrapulmonary in the heart as with congestive heart failure (CHF), kidneys (nephrotic syndrome), liver cirrhosis with ascites, and pancreas (acute pancreatitis) ***(Black, 1972)***.

Pleural effusions also occur with systemic illness, such as systemic lupus erythematosis and rheumatoid disease, and may result from cardiac injury (myocardial infarction) or as a reaction to therapy (Nitrofurantoin).

Therefore, patients with pleural effusion may present not only to pulmonologist but also to the general internist, medical specialist and the surgeon.

Classification of effusions into transudates or exudates is considered as the corner stone in diagnosis of the etiology of pleural effusion as it indicates the physiopathologic mechanisms involved. So, the primary

diagnostic step is the identification of an effusion as either a transudate or an exudate ***(Sahn, 1989)***.

Transudative effusion develops when the systemic factors influencing formation or absorption of pleural fluid are altered ***(Black et al, 1972)***. In contrast, as exudative pleural effusion develops when the pleural surfaces are diseased causing pleural fluid accumulation ***(Pierce, 1977)***.

Light et al, ***(1972)*** characterized pleural exudates as having at least one of the following criteria, pleural LDH > 200 IU/dl, a pleural LDH/ serum LDH >0.6 or pleural protein/ serum protein > 0.5. Recent researches have suggested that pleural cholesterol reflects the etiology of pleural effusion ***(Valdes et al., 1991)***. Later Marina Costa et al., ***(1995)*** suggested that the combination of pleural cholesterol and pleural lactate dehydrogenase could be successfully used in distinguishing transudative from exudative pleural effusion, with a high sensitivity and specificity.

The aim of this study is to test the value of the cholesterol and lactate dehydrogenase LDH, in pleural fluid and serum in order to differentiate between transudative and exudative pleural effusion in comparison to Light et al.,