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Effects of Diuretics on Characteristics of Pleural Fluid in Patients with Congestive Heart Failure Accompanied with Pleural Effusion

Mahmoud Bakir*

Abstract

Objectives: Pleural effusion is a common clinical condition. Congestive heart failure (CHF) is the most frequent cause of pleural effusions, which typically are transudates, but occasional patients with CHF are found to have exudates in the absence of an apparent cause other than CHF, and the presence of CHF does not always explain exudative effusions in those patients. We aimed to determine the incidence, clinical significance of such exudative effusions and to study the effects of diuretics on characteristics of pleural fluid in patients with CHF accompanied with pleural effusion.

Material and methods: 64 Patients with CHF accompanied with pleural effusion were prospectively studied in Almouasat University hospital. They were divided into two groups: The first group includes 29 patients who didn't receive diuretics before admission. Repeated diagnostic thoracentesis was performed until the effusions were unapparent in the chest x-ray. Second group includes 35 patients. They were receiving diuretic medications at the time of their thoracentesis, they saved as controls. 4 patients were excluded from the first group and 5 from the second .because they had another diseases

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Results and Conclusions: 1-The typical pleural effusion associated with CHF has the characteristics of transudate. Diuretic therapy in treatment of CHF may convert an associated transudative pleural effusion into a "pseudoexudate. In our study 36 % Transudates in the first group and 40 % in the second are misclassified as exudates by used light's criteria and cholesterol, so more criteria must be found to differentiate pleural effusions in such situation. 2- It is still not explained why exudates are not diagnosed in all CHF patients after diuretics but only in a part of them. More researches are needed to explain. 3- Exudates in patients with CHF is a "pseudoexudate" with prevalence of lymphocytes, because diuretic therapy may accelerate the reabsorption of water faster than the protein, LDH and cholesterol, so it increase their concentrations and those patients do not need aggressive and expensive manipulation as pleural biopsy or pleuroscopia for diagnosi **Keywords :** diuretics, pleural fluid. Congestive heart failure (CHF), pleural effusion.

Introduction

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0,001>P	0.09 +/- 0,49	0,09-/+ 0,37	% PL.Prot./S. Prot
0,05>P	84+/- 263	17- /+ 188	U/L LDH
0,05>P	0,18 -/+ 0.53	0,13 -/+ 0,42	% PL. LDH/S.LDH
0,001>P	20 +/-54	16 +/- 31	Mg/dL Cholesterol

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0.001>P	0.0 7-/+ 0,46	0,09-/+ 0,37	% PL.Prot./S. Prot
0.05>P	92 -/+271	17- /+ 188	U/L LDH
0.05>P	0,19 - /+ 0.50	0,13 -/+ 0,42	% PL. LDH/S.LDH
0.001>P	22 - /+ 52	16 +/- 31	mg/dL Cholesterol

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P value			
0.05<P	0. 82 -/+ 3.1	0.5 9-/+ 2.96	g/dL Total Protein
0.05<P	0.0 9 -/+ 0,49	0.0 7-/+ 0,46	% PL.Prot./S. Prot
0.05<P	84+/- 263	92 -/+271	U\L LDH
0.05<P	0,18 - /+ 0.53	0,19 - /+ 0.50	%PL. LDH/S.LDH
0.05<P	20 -/+54	22 - /+ 52	mg/dL Cholesterol



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