

PLEURAL FLUID PSEUDOCHOLINESTERASE AND ITS RATIO TO SERUM PSEUDOCHOLINESTERASE : FOR DIFFERENTIATING PLEURAL TRANSUDATES FROM EXUDATES

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ABSTRACT

BACK GROUND: The lights criteria is the system that has stood the test of time in classifying pleural effusions into transudates and exudates. But studies have shown that there is significant number of misclassification with the lights criteria. Several newer parameters are being postulated as an alternative to lights criteria for classifying effusions. Pleural fluid pseudocholinesterase and its ratio to serum pseudocholinesterase is one such parameter.

AIMS AND OBJECTIVES: To evaluate the usefulness of pleural fluid pseudocholinesterase(PChE) level and its ratio with serum pseudocholinesterase in order to differentiate between transudates and exudates.To compare the diagnostic efficacy of: (1) pleural fluid PChE value and (2) pleural fluid PChE to serum PChE ratio; with the efficacy of Light's criteria.

MATERIALS AND METHODS: 60 patients with pleural effusion with known etiology were selected and divided into transudates and exudates based on the etiology. lights criteria was applied to all patients. Pleural fluid PChE level and its ratio to serum PChE were estimated in all patients. ROC analysis and unpaired t test was done.

RESULTS: There was significant difference between the values of both Pleural fluid PChE level and pleral fluid to serum PChE ratio between exudates and transudates. Misclassification was less with the new parameters compaired to lights criteria. Sensitivity,specificity,PPV,NPV of Pleural fluid PChE level(96.2%,85.36%,89.36%,97.6% respectively)and pleral fluid to serum

PChE ratio(97.14%,91.6%,94.2%,98.3%) were better than that of lights criteria(93.3%,77.7%,83.3%,95.6%).

CONCLUSION: Both pleural fluid PChE and P/S PChE ratio are reliable parameters in differentiating transudates and exudates .PChE and P/S PChE ratio are more efficient than lights criteria in differentiating transudates and exudates .P/S PChE ratio is the most sensitive and specific parameter among the parameters studied.

Key words: pseudocholinesterase(PChE), negative predictive value(NPV), positive predictive value(PPV).