

# **SUMMARY AND CONCLUSIONS**

A cohort of 50 patients with pleural effusion were included in this study. Out of these, 37 were males and 13 were females.

The etiology in 31 patients was exudative while in 19 patients, it was transudative. Different parameters were used to distinguish between these two.

The mean value and standard deviation of each parameter was calculated separately in the exudative and the transudative groups. Using the unpaired 't' test of statistical significance, it was found that the difference in values of each parameter obtained in both groups was statistically significant between the two groups, viz, the difference in values of each parameter obtained in exudative and transudative pleural fluids is not by chance.

The parameters used in this study were –

- Pleural fluid protein level (according to Light et al)
- Pleural fluid Lactate Dehydrogenase level
- Pleural fluid Cholinesterase level, and
- Ratio of pleural fluid to serum cholinesterase level

The misclassification in the two groups was calculated for each parameter and subsequently the following were calculated –

- Sensitivity of test
- Specificity of test
- Positive Predictive Value
- Negative Predictive Value

The calculation of pleural fluid protein content and classifying on its basis had a high sensitivity (96.8 %) and negative predictive value (92.3%). In other words, if the pleural fluid is exudative, there is a very high chance that its protein content will be more than 3 g/dl. But, the converse is not always true as the test has low specificity.

Similarly, the calculation of pleural fluid cholinesterase content has a high specificity (94.7%) and positive predictive value (96.4%). If this value is high, then the fluid is very likely to be exudative. The converse may not be true to the same extent.

When the ratio of cholinesterase levels in pleural fluid to serum is calculated, it has a high sensitivity (96.8%) as well

as a high specificity (94.7%) and high positive and negative predictive values.

Thus, the study clearly emphasizes that calculation of the ratio of values of cholinesterase in pleural fluid and serum is the best parameter to categorize the etiology into transudative and exudative.