

## **ABSTRACT**

### **THE USEFULNESS OF PLEURAL FLUID URIC ACID AND ITS RATIO TO SERUM URIC ACID LEVELS IN CLASSIFYING PLEURAL EFFUSIONS AS EXUDATES AND TRANSUDATES AND ITS CORRELATION WITH LIGHT'S CRITERIA**

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**Keyword:** Pleural Fluid Uric acid, Exudates, Transudates

### **INTRODUCTION**

Pleural effusion is a very common clinical presentation of diseases. A correct diagnosis of the underlying disease is essential for the management of pleural effusion. A limited number of diseases cause Transudative Pleural Effusion, whereas exudative effusions require more extensive diagnostic investigations. Therefore, the first step is to classify them as transudates or exudates, even if this differentiation does not contribute to the etiological diagnosis.

Many criteria have been used to distinguish them, but none of them have been found to be satisfactory. Light's criteria is the most commonly used method

The criteria is one or more of the following to diagnose exudates.

1. Pleural fluid protein / Serum protein > 0.5
2. Pleural fluid LDH / Serum LDH > 0.6
3. Pleural fluid LDH more than 2/3rd of the upper limit of serum

## **AIMS AND OBJECTIVES**

To evaluate the advantages of Total Pleural fluid Uric acid and its ratio to Serum Uric acid levels in classifying Pleural Effusions as Exudates or Transudates.

## **MATERIALS & METHOD**

This study is to be conducted among 60 patients with pleural Effusion, attending the Department of Medicine & Department of Thoracic Medicine in Govt. Rajaji Hospital, Madurai.

## **METHODOLOGY**

This study was conducted in Govt. Rajaji Hospital, Madurai which is affiliated to Madurai Medical College. This study subjects were selected from the patients admitted in Department of Medicine and Department of Medicine, Govt. Rajaji Hospital.

The study was conducted in 60 patients; the patients had pleural effusion with clinical background of congestive cardiac failure, chronic liver disease, chronic kidney disease, tuberculosis, parapneumonic effusions, malignancy.

## **RESULT**

“By applying Light’s criteria in patients with transudative pleural effusion classified clinically, 85.2% % of the cases were correctly diagnosed as transudative pleural effusion.

By applying Pleural fluid Uric acid in patients with transudative pleural effusion classified clinically, 96.3 % of the cases were correctly diagnosed as transudative pleural effusion.

Among the parameters used, most specific test to classify an transudative pleural effusion from exudative pleural effusion is pleural fluid uric acid in which is 96.3 % and most sensitive test is pleural fluid / serum Uric acid ratio which is 96.96. %. The positive predictive value, negative predictive value and diagnostic accuracy to classify an transudative pleural effusion from a exudative pleural effusion is higher for pleural fluid total Uric acid which is 96.29 % , 95.23 % , 94 % respectively .

## **CONCLUSION**

For many decades Light's criteria had been used widely to differentiate exudative from transudative pleural effusion. But it also misclassified 25 % of transudates as exudates, so there was a need to identify new parameters which would prove to be superior or supportive to the array of tests at present.

From our study we came to know that there was statistically significant criteria [p value<0.001] in classifying pleural effusion as exudates and transudates by using pleural fluid uric acid and pleural fluid/serum uric acid ratio.

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