Title: Role of Dr-70 immunoassay in suspected malignant pleural effusion

Body: Introduction or background: A good proportion of patients with undiagnosed pleural effusion (PE) turn into malignancy over a period of time. Identification of positive biomarker may help in selecting the individuals who require close follow up. Aims and objectives: To evaluate the role of DR-70 immunoassay in suspected malignant PE. Methods: We conducted a cross sectional study among 89 patients of suspected malignant PE and 50 normal subjects (NS) were taken as control. Patients with exudative PE; who had pleural fluid lymphocyte count greater than 50% and adenosine deaminase (ADA) less than 30 U/L were taken as cases. We had selected normal subjects among relatives of patients having normal blood chemistry and radiological investigations. Results: Mean value of DR-70 in NS was found to be 0.83 ± 0.273 mg/L without any significant difference between males (0.82 mg/L) and females (0.85 mg/L). Mean value of DR-70 in PE with underlying cancer was 5.03 ± 3.79 mg/L. Sensitivity (80%) and specificity (77.78%) of the test was maximum in PE with underlying cancer using cut off value of 2 mg/L. Mean value DR-70 in malignant PE was 5.18 ± 3.75 mg/L and in non-malignant PE was 3.73 ± 3.74 mg/L without any statistically significant difference (p = 0.08). Conclusion: DR-70 assay has high sensitivity in detecting underlying lung cancer but has no role in differentiating malignant PE from non-malignant PE.