عنوان مقاله:

Utility of Cancer ratio (serum LDH: pleural fluid ADA) for predicting malignancy in patients with exudative pleural effusion

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خلاصه مقاله:

Introduction: Pleural effusion is an accumulation of fluid in the pleural space. It can be transudative or exudative. Mechanisms like alteration in Starling’s forces lead to transudative effusions while inflammation and infiltration by infections, malignancy, connective tissue diseases, etc lead to exudative effusions. Tuberculosis, viral, bacterial infections, and malignancy are common causes of exudative effusions whereas congestive heart failure, renal failure, and liver failure, etc are common causes of transudative effusions. Nearly ۴۰% of patients with malignancy have pleural effusion at the time of presentation. Bronchogenic carcinoma, carcinoma of the breast, lymphoma are the leading causes of malignant pleural effusion (MPE) followed by gastrointestinal, genitourinary, and gynecological causes. Pleural fluid Adenosine DeAminase (ADA) has good diagnostic sensitivity and specificity for tuberculosis whereas pleural fluid cytology /biopsy are the main diagnostic modalities for MPE. However pleural fluid cytology is positive in only ۴۸.۵% of cases in the first sample but the yield increases with repeated analysis or other more invasive investigations like blind pleural biopsy/thoracoscopy. In cases with negative pleural fluid cytology, a biochemical marker known as Cancer ratio i.e serum LDH and pleural fluid ADA can be useful in predicting malignant causes. A cancer ratio cutoff of more than ۲۰ helps in guiding the physician for further workups like FDG PET or tumor markers in evaluating malignancies. With this background our study aimed at the usefulness of cancer ratio in patients with exudative pleural effusion. Materials and Methods: It's a cross sectional observational study done for a period of ۱۸months.۱۰۰ adult patients with exudative pleural effusions were recruited into the study. Those who didn’t give consent, hemodynamically unstable, whose diagnosis is known were excluded. Serum LDH, pleural fluid ADA were done in all cases and the cancer ratio is validated for diagnosis of malignant effusions. Results:The mean age of

patients was ۵۵.۴۸±۹.۳۲ years. There were ۵۷ malignant and ۴۳ nonmalignant cases. Bronchogenic carcinoma was the leading cause of MPE and tuberculosis was the commonest cause of non-malignant pleural effusions. Mean serum LDH, Pleural fluid ADA, and cancer ratio in malignant cases and nonmalignant cases was ۴۳۴.۵۴ and ۳۵۰.۰۴IU/ml,۱۹.۰۵ and ۳۲.۹۷IU/ml and ۲۵.۱۳, ۲۰.۴۵ respectively. The sensitivity of cancer ratio was ۷۰.۱۷%, specificity ... was ۷۶.۷۴%, Positive predictive value was ۸۰% and Negative predictive value was ۶۶.۶%

کلمات کلیدی:
Cancer ratio, Pleural Effusion, Malignancy'Exudates