MALIGNANT PLEURAL EFFUSION BIOMARKERS AS PREDICTOR FOR CHEMICAL PLEURODESIS SUCCESS

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Aim: This study aimed to evaluate the value of biochemical parameters of the pleural aspirate in predicting success of chemical pleurodesis in adult patients with malignant pleural effusion.

Methods: This prospective study included 30 adult patients with malignant pleural effusion diagnosed by clinical examination, Chest CT scanning and closed pleurocentesis. Patient ages mean of 60.4 ± 7.8 years, multiple sessions of closed pleurocentesis were carried out followed by insertion of an intercostal tube. The pleural aspirate was then sent for chemical analysis to detect Glucose, PH, and LDH. Pleurodesis was then done either by using Tetracycline (group A), or Bleomycin (group B). All patients were then followed up for success of the pleurodesis process within one month.

Results: Within one month of follow-up, rates of clinical response to treatment in group A (Tetracycline) were successful in (40 %); versus group B (73.3 %). Complete response (CR) occurred in group A cases (20 %); versus (33.3 %) in group B; whereas partial response (PR) occurred in 3 cases of group A; versus 6 cases of group B; and treatment failure (TF) occurred in 9 of group A cases versus 4 of group B case. None of our patients died. Morbidity occurred in the form of mild-to-moderate. The success of the pleurodesis was closely-associated to a higher glucose and PH levels together with a low LDH level in the pleural fluid.

Conclusions: The success of pleurodesis is usually higher when the pleural fluid PH and glucose levels are high & the LDH level is low in MPE.

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