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**Title:** Pleural effusion in respiratory intensive care unit: Different spectrum needs different approach

Dr. Nilesh 27860 Chinchkar drnilesh.chinchkar.118@gmail.com MD <sup>1</sup>, Dr. Deepak 27861 Talwar dtlung@hotmail.com MD <sup>1</sup> and Dr. Sharad 27862 Joshi drsharadjoshi@gmail.com MD <sup>1</sup>. <sup>1</sup> Respiratory, Metro Centre for Respiratory Diseases, Noida, UP, India, 201301 .

**Body:** Introduction: In ICU most common cause of pleural effusion (PI.E) is CHF. However, etiologies of PI.E vary depending on case mix population. In respiratory cases presence of PI.E implies serious local or systemic disease. Aim of the study was to determine etiology of PI.E in RICU Methodology: The present study was conducted on 50 consecutive patients detected with PI.E at the RICU of Metro Centre for Respiratory Diseases, India. Site of aspiration and quantity of pleural fluid (PI.F) was estimated by USG chest. Chest radiograph, CT chest and USG guided thoracentesis, with PI.F analysis (protein, LDH, sugar, TLC, DLC, ADA, BNP, amylase, creat, bilirubin, cholesterol, TG, cytology, HCT) done and if undiagnosed thoracoscopic pleural biopsy was done Results: Mean duration of stay in patients developing PI.E in RICU was 18 days, 5 days more than patients admitted with PI.E. 30% of the PI.E were transudate and 16% discordant exudates. Etiology was undetermined in 12%. The most common cause for PI.E was malignancy (24%); metastatic adenocarcinoma from unknown primary (6%), followed by parapneumonic (22%), CHF (18%) and tuberculosis (14%). PI.E diagnosed clinically in 30% and 48% on chest X ray. On USG, 70% of PI.E were quantified as <500 ml, 14% >1000 ml fluid and loculated in 12%. The mean PI.F BNP was more than 20,000 pg/ml in patients with CHF. Non transudate effusions had normal BNP. Thoracoscopic pleural biopsy established etiology in 90% of undiagnosed PI.E Conclusion: Etiology of PI.E is different in RICU. Malignant and parapneumonic PI.E contributing to nearly half of cases. PI.E had significant implications in management, aggressive approach using thoracoscopic pleural biopsy is needed to confirm diagnosis.