Pleural effusion in chronic kidney disease: An ongoing dilemma

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Body: Background: Pleural effusion among patients of chronic kidney diseases (CKD) is an ongoing dilemma to nephrologists and pulmonologists especially in developing countries where tuberculosis is a common cause of pleural effusion. While uremic effusion is a diagnosis of exclusion, the sensitivity and specificity of various modalities of diagnosis of tuberculous effusion vary. Methods: A prospective cross-sectional observational study of all adult patients of pleural effusion with either CKD (stages 3 to 5) or renal transplant attending a tertiary-care institute in eastern India was performed over a year. An analysis of the etiological profile, clinical characteristics and treatment modalities of pleural effusion in CKD was carried out. Results: 430 CKD (stages 3 to 5) patients and 34 post renal transplant patients were evaluated during the study period. Incidence of pleural effusion was 6.74% (29/430) in CKD patients and 5.88% (2/34) in post transplant patients. Exudative effusion was slightly more predominant (51.6%, 16 of 31) but heart failure remained the single most common etiology (41.9%, 13 of 31). Tuberculosis (n=8, 25.8%) and uremic effusion (n=6, 19.4%) were responsible for the majority of exudative effusions, followed by empyema (n=2). Conclusion: Symptomatic pleural effusion was present in 6.74% patients of CKD (stages 3 to 5) and in 5.88% of post transplant patients. Heart failure, tuberculosis and uremic effusion accounted for 41.9%, 25.5% and 19.4% cases respectively. Differentiating tuberculosis from uremic effusion requires a combined clinico-pathological approach and this differentiation is absolutely necessary in view of its strong therapeutic implications.