Pseudochylous pleural effusion as a potential complication of tuberculous empyema

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When an empyema with an exclusively lymphocytic cell content assumes a ‘pale creamy’ appearance, there is a possibility that the empyema has evolved into a pseudochylothorax. Otherwise, in the absence of either pseudochylothorax or chylothorax, a tuberculous pleural effusion with a >90% content of lymphocytes would be expected to have a serous instead of a pale creamy appearance, even when the total leukocyte content approaches 5000/ml. In an empyema that has not evolved into a pseudochylothorax, it is the presence of a high concentration of leukocytes (with a marked preponderance of neutrophils) and the presence of debris which confers a turbid appearance to the pleural fluid. However, when the empyema has evolved into a pseudochylothorax turbidity is attributable neither to the cell content nor to debris but to the presence of cholesterol crystals. Pleural fluid turbidity which is attributable to cholesterol crystals characteristically persists after centrifugation, and the same is true of turbidity attributable to chylomicrons. By contrast turbidity attributable to the cellular content and to debris gives way to a clear supernate after centrifugation. Given the fact that turbidity of the pleural fluid can be caused either by cells and debris or by a high lipid content, a case may be made for routine centrifugation of all turbid pleural aspirates so as to optimize the identification of pseudochylothorax and chylothorax, especially in the light of the comment that has been made that ‘tuberculosis will remain the leading cause of pseudochylothorax during the next decades due to the current high incidence of tuberculosis and the increasing problem of drug resistance’.

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References