

ABSTRACTS OF CASE REPORTS

CR 12

Respiratory Distress in a Preterm Neonate due to a Milky Pleural Effusion

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Introduction

Chylothorax is a rare presentation defined as presence of chyle in the pleural space due to leakage from thoracic duct or its tributaries following damage or blockage. The discriminating feature of chylothorax is the presence of high triglycerides and lymphocytes in the pleural effusion. Main clinical manifestations depend on the rate of chyle leakage resulting in respiratory compromise.

Case presentation

A neonate born at 25 weeks of gestation (665 g) was ventilated due to respiratory distress at birth and started on treatment for presumed sepsis. Her chest X-rays revealed obliterated right costophrenic angle indicating a pleural effusion which prompted thoracentesis. Interestingly, pleural fluid was milky in appearance with high triglyceride level [57 mg/dL(>110)], low cholesterol level [<50 mg/dL (<50)] with lymphocyte predominance on microscopy. The pleural fluid remained uniform during centrifugation and fluid to serum triglyceride ratio was 1.9 (>1) with cholesterol ratio of <1 (<1) confirming the diagnosis of chylothorax. The baby was kept nil-by-mouth and started on parenteral nutrition following clinical diagnosis of chylothorax. However, baby expired on day 12 due to extreme prematurity, sepsis.

Discussion

The established cut-off for triglyceride in pleural fluid for chylothorax is 110 mg/dL which has been noted to be too high for premature neonates. In such instances, demonstration of chylomicrons by lipoprotein electrophoresis (gold standard) may not be freely available. Therefore, fluid-to-serum triglyceride (>1), cholesterol (<1) ratios can be conveniently used as the cut-off limits for the diagnosis of chylothorax. Also, demonstration of low triglycerides in the infranantant of centrifuged sample is another method to attribute high triglyceride to the presence of chylomicrons.

Keywords

Chylothorax, chyle, milky pleural effusion