Neonatal lobar emphysema presenting as opaque lung
Shivaprasad B¹, Lakshmi V², Shanmugasundaram R³
Department of neonatology, Mehta children’s hospital, Chennai-28, Tamilnadu, India

*Corresponding Author:
Name: Dr. Shivaprasad B
Email: neoprasad@gmail.com

Abstract: We report a case of congenital lobar emphysema in a male baby who presented with respiratory distress since birth. Initial x-ray showed lobar opacity on right side. Follow up X-rays showed classical presentation of lobar emphysema. Computed tomography demonstrated CLE. We emphasize the importance of follow-up and repeat imaging in cases with these type of naturally evolving stages.

Keywords: lobar, emphysema, neonatal, opaque, hyperlucency

INTRODUCTION
Congenital lobar emphysema is hyperinflation of one or more lobes of the lung due to defect involving the bronchopulmonary tree[1]. Most infants present in the newborn period with respiratory distress, decreased breath sounds and mediastinal shift. Chest radiography characteristically reveals an hyperaerated lobe.

CASE REPORT
A term male baby delivered by cesarian section presented with mild respiratory distress at 3hrs of life. Initial X ray showed mid zone opacity suggestive of retained pulmonary fluid on the right side. He was treated with oxygen and IV fluids and respiratory distress subsided within 72hrs of life. Repeat X ray taken showed resolution of mid zone opacity replaced by hyperlucency with vascular markings on right side with mediastinal shift towards left side(Fig 1). Congenital lobar emphysema was diagnosed and CT scan showed classical right middle lobe emphysema(Fig 2). Right middle lobe lobectomy was done and post-operatively baby was stable.

Fig-1: Mid zone opacity (R) possible delayed expulsion of pulmonary fluid
Fig-2: Hyperlucency with vascular markings and mediastinal shift.
Fig-3: CT chest - right middle lobe emphysema with attenuation of vascular markings and compression of lower lobe and herniation of emphysematous lobe.

DISCUSSION
Congenital lobar emphysema (CLE) is most
often detected in neonates and it is a known cause of respiratory distress in the neonate. The characteristic large hyperlucent lobe is classical radiological finding[1]. The opaque lung, on the other hand, as a manifestation of CLE is not well appreciated. In neonatal radiological images, the affected lobe may be slightly opacified, rather than lucent, because it is still filled with fluid.

Most conditions in this category are usually seen with the typical check-valve type of obstruction which results in overexpansion and hyperlucency of the affected lobe or lung [2]. Obstruction is believed to occur early in intra-uterine life and fluid accumulates proximal to the obstruction and this gives initial opaque appearance. Later as fluid cleared, the classical appearance develops [3,4]. Added possibility is that emphysematous lobe does cause functional lymphatic obstruction [5].

CONCLUSION
In this case contrary to hyperlucency in emphysema, x ray initially presented as opacity. As some cases are still in the evolving stages ,it needs careful follow-up.

REFERENCES