ISSN: 0975-8585

Research Journal of Pharmaceutical, Biological and Chemical Sciences

Lipoid Pneumonia in a 10 Month Old Infant.

Kuppusamy Ramdass, Venkatesh Soma, Chandrasekaran Venkatesh*, Dhandapany Gunasekaran, Sadagopan Srinivasan.

Department of Pediatrics, Mahatma Gandhi Medical College & Research Institute, Pillaiyarkuppam, Puducherry 607402, India.

ABSTRACT

The practice of instillation of oil into the nose and mouth of infants is an age old practice prevalent in rural parts of Tamil Nadu. Oil instillation is an important cause of persistent pneumonia in children. Depending on the nature of oil aspirated, varying grades of inflammation can be seen in the lungs resulting in severe and persistent respiratory distress often requiring intensive respiratory support. We describe the clinical course of a ten month old infant who developed acute severe respiratory distress following aspiration of orally administered vegetable oil preparation, as a laxative, by her grandmother.

Keywords: Lipoid pneumonia; respiratory distress; infant

Corresponding author

ISSN: 0975-8585

INTRODUCTION

The practice of instilling oil into the nose and mouth of young infants is rampant in rural areas of Tamil Nadu, India [1]. This practice results in oil aspiration and pneumonia in these infants. Lipoid pneumonia takes time to resolve and is often complicated by repeated secondary infections resulting in prolonged hospitalization and morbidity. We report a ten month old infant who developed severe respiratory distress following administration of oil by her grandmother as a laxative.

Case Report

A ten month old female infant was brought with history of sudden onset bouts of cough followed by respiratory distress following oral administration of vegetable (castor) oil by her grandmother as a laxative. On admission, the infant was irritable, tachypneic, with RR of 100/min with severe subcostal and intercostal retractions, grunt and cyanosis. HR was 190/minute and CFT was less than 3 seconds. Pulse oximetry revealed a saturation of 86% in room air which improved to 96% with 8 litres/min of oxygen. Respiratory examination revealed bilateral crepitations. In view of impending respiratory failure, the child was shifted to PICU and was treated with high flow oxygen by hood, intravenous fluids; Investigations revealed total count of 5000/cumm with Neutrophils of 36% and Lymphocytes of 64%. CRP was positive (1.6 mg/dl) and Chest xray revealed bilateral fluffy infiltrates (right more than left) involving the upper and mid zones (Figure 1). Injection Ceftriaxone and Amikacin were added along with dexamethasone in view of severe respiratory distress. After 48 hrs, the infant developed bronchial breathing in the right interscapular region with worsening respiratory distress. In view of this finding, injection cloxacillin was added and dexamethasone was stopped. Over the next 96 hours the child showed gradual improvement in the form of improving sensorium, decreasing respiratory distress and decreasing oxygen requirements. The infant was started on NG feeds after 72 hrs of hospitalization which was gradually made to full oral feeds along with tapering of IV fluids over the next 48 hours. She became well and was discharged home following 7 days of antibiotics.

Figure 1: Chest radiograph showing bilateral fluffy opacities

DISCUSSION

Lipoid pneumonia is an important cause of persistent pneumonia in children [2]. Lipoid pneumonia may be exogenous following aspiration or endogenous when associated with infections like tuberculosis, connective tissue disease and benign or malignant neoplasms [3]. It can be acute or chronic depending upon duration of aspiration. Symptoms depend upon the type of oil aspirated, being severe for animal fats and mild for inert mineral oil aspirations [4]. Acute Lipoid pneumonia typically presents with cough, dyspnea and low grade fever [4]. On radiographs, ground glass or consolidative opacities may be seen bilaterally in the middle and lower lobes and may be rarely associated with pneumatocoel formation [4]. Pneumothorax and pneumomediastinum are recognized late complications and associated with increased morbidity and mortality [4]. Radiological changes may persist for 2 weeks to as long as 8 months [5]. Other modalities of investigation include High Resolution computed Tomographic scans of the chest (HRCT) which reveal hypo attenuation and air bronchogram patterns. Sudan staining of broncho alveolar lavage fluid reveals foamy macrophages[6].Treatment protocols are poorly defined and variable with just symptomatic therapy recommended for mild symptoms and aggressive therapy involving therapeutic lavage and systemic steroids for extensive pulmonary damage[7,8]. In our case the diagnosis was straight forward as the symptoms appeared following administration of oil to the infant by her grandmother. The infant presented with severe respiratory distress with impending respiratory failure and chest radiographs showed typical features of lipoid pneumonia. She improved with oxygen, systemic corticosteroids and intravenous antibiotics. Use of systemic steroids have been reported to be successful in the management of lipoid pneumonia [9,10]. They probably act by controlling the inflammation associated with lipid aspiration.

CONCLUSION

In young infants, administering oil per orally is fraught with the danger of aspiration and severe lung injury. Health education about the ill effects of oil instillation is the need of the hour to prevent this menace. In the said case, the infant`s grandmother and parents were educated about the ill effects of per oral oil administration and not to attempt it in future.

REFERENCES

[1] Adhisivam B, Mahadevan S. Indian J Pediatr 2006; 73(6): 544.
[2] Kumar M, Biswal N, Bhuvaneswari V, Srinivasan S. Indian J Pediatr 2009;76(12):1223-6.
[3] Ahmed A, Gupta V, Fleming DA, Aggarwal K. Mo Med 2007;104(5):446-7.
[4] Betancourt SL, Martinez-Jimenez S, Rossi SE, Truong MT, Carrillo J, Erasmus JJ. Am J Roentgenol 2010;194(1):103-9.
[5] Kitchen JM, O` Brien DE, Mc Laughlin AM. Thorax 2008; 63:401-439.
[6] Sias SM,Ferreira AS, Daltro PA, Caetano RL, Moreira Jda S, Quirico-Santos T. J Bras Pneumol 2009;35(9):839-45.
[7] Hadda V, Khilnani GC. Expert Rev Respir Med 2010; 4(6): 799-807.
[8] Marchiori E, Zanetti G, Mano CM, Hochhegger B. Respir Med 2011;105(5):659-66.
[9] Indumathi CK, Vikram KS, Paul P, Lewin S. Indian J Chest Dis Allied Sci 2012;54(3):197-9.
[10] Annobil SH, el Tahir M, Kameswaran M, Morad N. Trop Med Int Health 1997;2(4):383-8.