Congenital Lobar Emphysema: Diagnosis and Management

Dear Editor,

This is with reference to case report titled “Anaesthetic management of children with congenital lobar emphysema: A report of two cases”. (MJAFI 2005; 61:79-81).

1. In congenital lobar emphysema (CLE), the clinical manifestations become apparent in the neonatal period but may be delayed for as long as 5-6 months in 5% of patients. Congenital deficiency of bronchial cartilage, external compression by aberrant vessels, bronchial stenosis and redundant bronchial mucosal flaps have been described as leading to bronchial obstruction and subsequent CLE. In the present case report, both cases presented at 6 weeks of age. In both cases, the authors describe secretions, as tenacious, viscid and purulent in one case and requiring repeated tracheal suctioning in both the cases. This gives rise to a doubt about the diagnosis, as mucous plug obstruction (with ball valve effect permitting inflow of air but obstructing outflow) could give rise to similar clinical and radiological picture. A histopathological study of the resected specimen is the only way to differentiate congenital from acquired etiology.
2. The routine use of prenatal ultrasonography has resulted in early identification and serial evaluation of congenital lung lesions. CLE can be distinguished from other congenital lung

lesions on ultrasonography by differences in echogenicity and reflectivity. This helps in identification and surgical management of the anomaly during neonatal period.

3. The fall in temperature of the infant during surgery in the second case highlights the importance of paying special attention to maintenance of temperature during surgery in neonates and infants. The various measures needed include warmed operating rooms, warmed parenteral solutions and fluids and covering exposed parts of the baby especially the head. Involving a pediatrician skilled in neonatal care and ventilation may have helped in avoiding the complications which these babies suffered intraoperatively.

References

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2. Olutoye OO, Coleman BG, Hubbard AM, Adzick NS. Prenatal diagnosis and management of congenital lobar emphysema. Eur J Pediatr Surg 1999; 9: 364-8.

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REPLY

I thank the author for his interest in my article and his valuable comments.

While it is true that only histopathology can differentiate between congenital and acquired form of emphysema, it is only of academic interest as it has no bearing on the management. There was no doubt regarding diagnosis in both the cases, as there were several pointers towards the congenital origin of the entity. Not only did the infants become symptomatic at an early age, the duration of symptoms were too short to explain acquired etiology. The omission was deliberate as the focus of the report was on the anaesthetic issues.

Prenatal ultrasonography has proved to be useful in diagnosis of many congenital lesions, let alone lung lesions.

As for involvement of a “paediatrician skilled in neonatal care and ventilation” during anaesthetic management, it will be sufficient to mention that similar degree of skills are available inside the operation theater when these cases are managed by a paediatric anaesthesiologist. Hypothermia is an invariable accompaniment of prolonged surgeries, especially those which involve opening of body cavities such as thorax and abdomen. All the preventive measures are taken routinely for such cases and the important point is to recognize its occurrence and intervene accordingly.

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