

Abstract 006

Empyema Thoracis in Children – Tailored Surgical Therapy for Late Referrals: A Single Unit Experience – Study in Suburban Mumbai

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Overview:

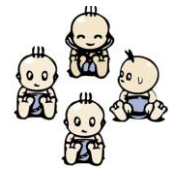
- Empyema Thoracic (ET) is a frequently encountered clinical problem and is responsible for significant morbidity and mortality worldwide.¹ Diagnosis may be difficult; delay in treatment contributes to morbidity, complications, and mortality².
- The ideal management strategy for ET has not been elucidated due to a paucity of properly conducted randomized controlled trials.

Objectives: Despite the reported value of institution of early drainage for ET, many children continue to be “referred late” in the disease process – STAGE II or III³ and beyond one to three weeks after diagnosis of ET. The author wishes to determine the optimal management for this group of children.

Methods: Period of Study- April 2009 to April 2011 – A total of 142 children with ET were referred to a single paediatric surgeon (first author). Sixty (42%) were diagnosed as late-presenting ET (STAGE II or III) and were referred late - one to three weeks after diagnosis of ET had been established. Patients were grouped as follows: **Group 1:** Managed with Intercostal Drainage (ICD) alone (n=82). **Group 2:** Managed by *Video-assisted Thoracoscopic Surgery (VATS) alone* (n=30). **Group 3:** VATS converted to Open Decortication (n=14). **Group 4:** Early Thoracotomy & Decortication (n=16).

Results: 82 (58%) were early referrals (within one week of diagnosis of ET) and could be successfully managed with ICD alone (Group 1). 60 (42%) of late-presenting ET required some form of surgical intervention (Groups 2, 3 & 4). Primary ICD could be avoided in half of VATS i.e. Group 2 as compared to Groups 3 & 4 (**Fig.1**). There were no significant differences with respect to age, gender, pleural cultures or fluid analysis amongst any of the groups. **Fig. 2** gives the distribution of various variables amongst patients. Treatment using *ICD alone* (Group 1) although successful in 58% of patients was associated with prolonged length of stay (LOS) when compared to *Early Thoracotomy & Decortication* (Group 4; 14 days vs. 13.42 days). For Groups 2 and 4 rapid clinical improvement and early discharge (9.13 to 13.42 days) was seen after surgery. For all surgery groups, *VATS alone* i.e. Group 2 (n=30) had a longer post-operative febrile period (4.5 vs. 2.5 days), but a shorter total LOS (9.13 vs. 13.42 days) when compared with *Early Thoracotomy & Decortication* i.e. Group 4 (n=16). Group 3 patients *VATS Converted to Open Decortication* (n=14) were noted to have the longest hospital stay (15.27 days). There was no mortality in our series.

Conclusion: Drainage of ET will be required at some stage, and an early surgical consultation is desirable in a child with an ET.

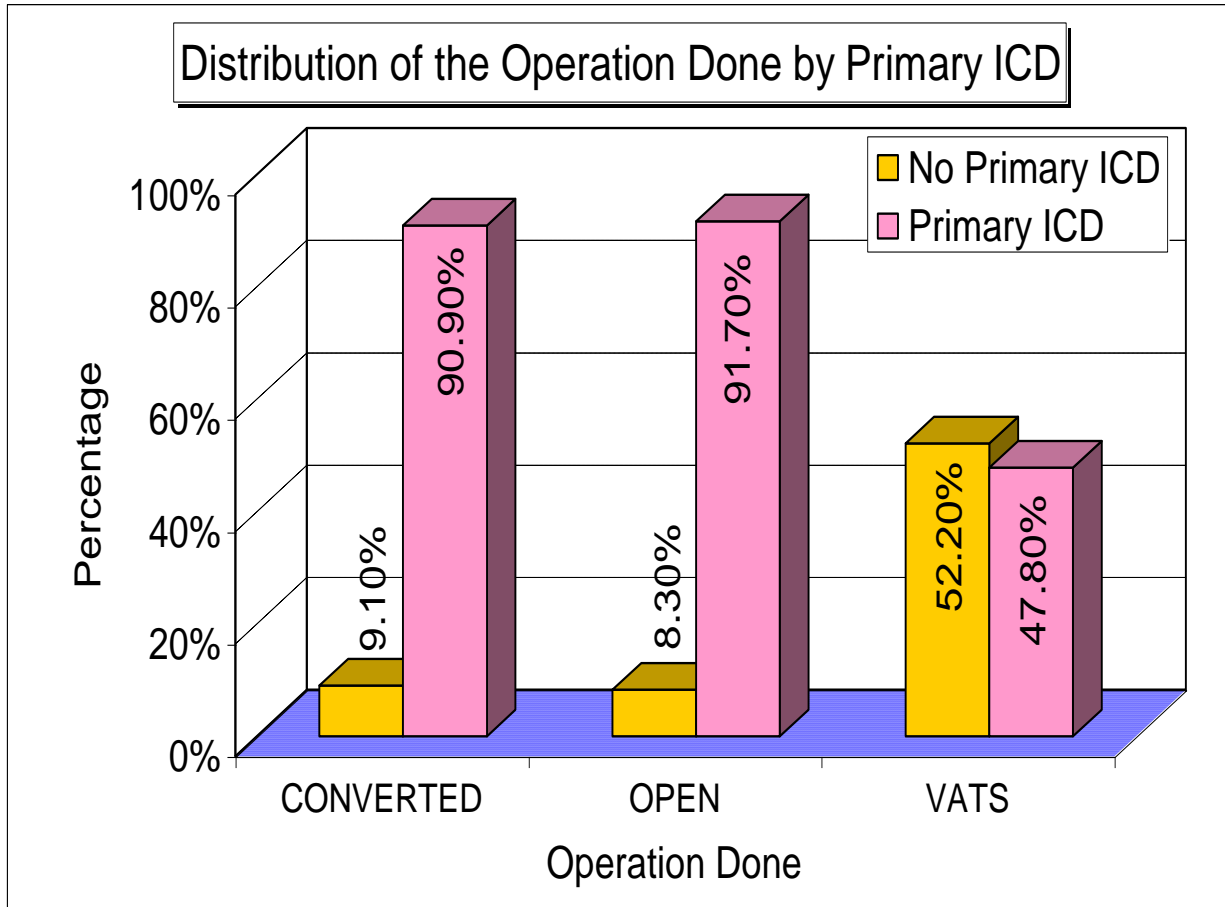


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3. American Thoracic Society. Management of nontuberculous empyema. *Paediatr Respir Rev* 1962; 85:935-936.

Figures 1 & 2:

Fig. 1: Distribution of the Operation Done by Primary ICD.



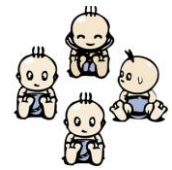


Figure 2: Distribution of Various Variables amongst Patients.

