European Respiratory Society
Annual Congress 2013

Abstract Number: 5495
Publication Number: P2698

Abstract Group: 10.1. Respiratory Infections
Keyword 1: Infections **Keyword 2:** Pleura **Keyword 3:** Treatments

Title: Study of pleural empyema evolution depending on drainage size used

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Body: Objective: Pleural drainage (PD) is the initial treatment option in patients with empyema. The aim of our study was to analyze the evolution of the empyema treated with PD depending on tube size used. Material and Methods: This is a retrospective study over 10 years. We have analyzed the type of PD used (small (≤ 14F) and large (> 14F)), days of hospitalization (DH), fluid biochemical data, thoracic ultrasound, use of fibrinolysis, need for decortication and mortality. Placing either PD size is done randomly without following any clinical or biochemical criteria. Results: We reviewed 50 patients, 72% were men and the average age was 53.14 ± 14.7 years. Small tube was placed in 40%, large tube in 48% and unknown thickness in 12%. The average pH of pleural fluid was 6.74 ± 0.43. The days until the placement of the DP were 3.58 ± 4.37. The average hospital stay was 21.04 ± 12.12 days. In a 36% thoracic ultrasound was made with a delay of 0.26 ± 0.45 days from request. In a 63.27% fibrinolysis was used. Total mortality was 4% with good evolution of the remaining patients, of whom 6% needed decortication. We used a Chi-square to assess mortality and surgery needs depending on tube size and t-Student to analyze the DH depending on tube size (table1) and the delay in the placement of PD (table2).

Fig.1

n=44	Small drainage (46%)	Large drainage (54%)	p
Surgery (%)	2,27	4,55	0,66
Mortality (%)	0	4,55	0,18
DH*	19,5±15,12	22,5 ± 10,3	0,43

Fig.2

n=47	< 5 days (40)	>5days (7)	p
DH*	18	32	0,004

*Average

Conclusions: • In our practice, small drainage is as effective as the large tube for the treatment of pleural empyema. • An excessive delay in the placement of pleural drainage is associated with an increase in hospitalization days.