

SVIII5: PARAPNEUMONIC EMPYEMA: RESULTS OF SIMPLE DRAINAGE AND THORACOSCOPIC APPROACH. 10 YEARS OF SINGLE CENTRE EXPERIENCE

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Background In literature there is a lack of consensus regarding the optimal management of pediatric parapneumonic empyema (PPE). In clinical practice approaches differ about duration of antibiotics therapy, indications for drainage, first-line methods of drainage (pleural puncture, pleural drainage, fibrinolytic agents and surgical debridement by open thoracotomy or VATS). We present our experience on surgical management and how practice modified during years our approach to these patients.

Materials and methods We retrospectively analyzed case-records of patients who presented to our attention during last ten years because of a PPE not respondent to conservative therapy with antibiotics. We considered age, duration of intravenous antibiotic therapy, imaging (chest radiograph, ultrasound, TC) and systemic conditions before surgery; then we analyzed surgical approaches, results and length of hospital stay.

Results In last ten years 40 patients were referred to our service because of PPE greater than 3 cm and/or with loculations on imaging (ultrasound or CT) and with deterioration of general conditions (fever, pain, compromised respiratory function). The age ranged from 3 months to 17 years (mean age 5.3 years). Choice of first line surgical approach was made on PPE imaging features: in 24 patients we positioned a pleural drainage and instilled fibrinolytic agents; in remaining 16 patients according history symptoms and imaging study we preferred a direct surgical debridement performed by thoracoscopy (6 with one operative trocar). After chest tube placement, 7/24 patients (29%) failed fibrinolysis and required a thoracoscopic surgical debridement. After surgical thoracoscopic debridement, 3/16 patients (19%) (3 treated with one operative trocar) needed a second look, with success.

Conclusions According to recent literature, in our experience thoracoscopic treatment of parapneumonic empyema is safe and effective in the majority of patients, leading to a faster PPE resolution. However a careful selection of patients based on clinical signs and imaging (chest X-ray, ultrasound, CT) is mandatory before surgery. In fact pleural drainage and fibrinolytic agents remain the first line approach for simple PPE. We also agree with literature stressing the need of multicenter prospective clinical trials to determinate a consensus on diagnosis and treatment of PPE.

Key words parapneumonic empyema, pleural drainage, fibrinolytic agent, thoracoscopy, thoracoscopic debridement