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MANAGEMENT OF PLEURAL EFFUSION IN CHILDREN: EVALUATION OF A THERAPEUTIC PROTOCOL

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Background: Pleural effusion and empyema often imply long hospitalisations, and may require surgical intervention; treatment is controversial.

Objectives: Evaluate therapeutic effectiveness of a pre-defined protocol.

Methods: From Oct97 to March03 84 patients with pleural effusion were assigned. Clinical, radiological and laboratory data were analysed; severity was classified according to Light RW (1995): Class I managed with antibiotics, Class II thoracocentesis, Class III chest tube drainage, Class IV/V drainage, thoracoscopy and fibrinolytics. Children from Class I, II (A) were compared with class III, IV, V (B).

Results: Mean age 4,5 years (3 months to 14 years, median= 3); 60 children from class I-II (A) and 24 class III-V (B). Significant differences between A and B were found: age < 2 (19 vs 13; p = 0,04), leucocytosis and neutrophils at 48 hours (13003 vs 22138, p=0,00; 57% vs 70%; p=0,004), pleural effusion pH (7,3 vs 6,8 p=0,00) , glucose (65,3 vs 23,5; p=0,00), proteins (4,8 vs 4,2; p=0,04). Etiologic agents identified in 11/24 in B and in 2/60 in A (p=0,00): Staphylococcus aureus (5/B), Streptococcus pneumoniae (4/B; 1/A), Haemophilus influenza (1/ A), Streptococcus viridans (1/B), Group A streptococcus (1/B).

Fifteen (18%) patients underwent thoracoscopy with no complications. One patient needed thoracotomy. In B, patients undergoing thoracoscopy had shorter hospitalisation (16,3 vs 21,3).

Three children underwent fibrinolytic treatment and had severe complications.

Comments: Pleural Effusion and empyema have well defined clinical and laboratorial presentations. Our protocol seems very adequate since early thoracoscopy shortened the length of stay and we had good outcomes in all children.

