USUFULNESS OF HIGH RESOLUTION COMPUTED TOMOGRAPHY IN DIAGNOSIS OF PLEURAL EMPYEMA IN PAEDIATRIC PATIENTS.

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Introduction: Pleural empyema is a concentration of pus in the pleural space. This serious condition is usually preceded by pneumonia. High fever, chest pain, cough, dyspnoea are the most common symptoms.

Obcjective: The aim of this study is to assess the usefulness of HRCT in the early diagnostic process.

Material and Methods: 46 children, (**25** females and **21** males in age 1-16 y.o. with mean age **5.35**) with thoracic empyema were hospitalized in Paediatric Surgery Clinic of Wroclaw Medical University from June 2011 to January 2014. All patients had the computed tomography on High-Resolution CT - 128 raws - Siemens SOMATOM Definition AS+ performed . In this retrospective study the time of the hospitalization, laboratory test results and surgical procedures were analysed. Images were captured at lung windows settings.

Results: There were abnormalities in all analysed CT scans. The enhancement of parietal pleura was present in 38 of the 46 patients (82%) and was seen completely along the parietal pleura bordering fluid collection. There were also 3 measurements of density of the fluid obtained. All of them on axial images. The mean density of the fluid was between 24 and 124 H.U., strongly indicating presence of the pus.

Conclusion: HRCT with thin-layer collimation (1mm) is a quick, accurate and non-invasive method, excellent in paediatric population. It does not require sedation, what makes examination more comfortable for patients. Density measurements can differentiate with a high probability uncomplicated pleural effusion from pleural empyema. Early use of HRCT can shorten the diagnostic process.