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Title: Changes in body temperature, white blood cells count and differential blood count after only diagnostic thoracoscopy and thoracoscopic pleurodesis in patients with malignant pleural effusions

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Body: Introduction Pleurodesis is the fundamental treatment in patients with malignant pleural effusions. It is difficult to answer if after it the changes in inflammatory parameters such as body temperature and white blood cells count results from the procedure itself or are due to the pleural reaction after installation of agent. Aim and objective of the study We compare the changes in white blood cells count (WBC) and body temperature in two groups: the first one with only diagnostic thoracoscopy due to a “trapped lung” and the second one with pleurodesis. The objective is to use these parameters as predictors for successful pleurodesis and to compare effectiveness of different pleurodesis agents. Materials For 3 years period a total of 80 pleurodesis by different agents (talc, iodopovidone, silver nitrate, doxycycline) and 20 only diagnostic thoracoscopies were carried out. The level of pleural inflammation was measured by monitoring of WBC and differential blood count (twice within postoperative 48 hours), and a body temperature as well. Results The temperature elevation during the first 6 to 24 hours and stabilization during the next days was found in pleurodesis group irrespective of the pleurodesis agent (p>0,001). In diagnostic group we did not observe such temperature peaks. An increased levels of WBC and segments cells and decreased levels of lymphocytes counts were found in pleurodesis group compared to diagnostic thoracoscopy group. Conclusion We conclude that inflammatory changes after pleurodesis are results from pleural reaction caused by pleurodesis agents.