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PLEURAL EFFUSION IN THE THERAPEUTIC PRACTICE

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Pleural effusion is common in routine medical practice and can be due to many different underlying diseases [1]. The accumulation is associated with many medical conditions that predispose to fluid accumulation via many different mechanisms, including increased pulmonary capillary pressure, decreased oncotic pressure, increased pleural membrane permeability, and obstruction of lymphatic flow [2]. In most diseases related to pleural effusion, the fluid analysis yields important diagnostic information, and in certain cases, fluid analysis alone is enough for diagnosis. The many important characteristics of pleural fluid are described, as are other complementary investigations that can assist with the diagnosis of common and rare pleural effusions [3, 4].

The most common causes of transudate pleural effusions all over the world are left ventricular failure, pulmonary embolism, and cirrhosis (causing hepatic hydrothorax), while the most common causes of exudative pleural effusions are bacterial pneumonia, cancer (with lung cancer, breast cancer, and lymphoma causing approximately 75% of all malignant pleural effusions), viral infection, and pulmonary embolism [5, 6].

To treat the pleural effusion appropriately, it is important to determine its cause. With knowledge of the pleural fluid cytology, biochemistry, and clinical presentation, an etiological diagnosis can be established in approximately 75% of patients. However, the etiology of pleural effusion remains unclear in nearly 20% of cases [7, 8].

Aim of work. To conduct the diagnoses and differential diagnoses between several types of Pleural effusions (PE).

Materials and Methods. During 12 months presence of PE was diagnosed in 57 patients of the therapeutic department (24 females and 33 males of middle age (48,2±6,8 y.)). The patients were examined with standard objective, laboratory and instrumental methods (CBC, Sputum examination, Chest X-ray, CT-scan, Chest Ultrasonography, Thoracentesis to differentiate transudate from exudate, Pleural biopsy and Thoracoscopy).

Results of examination. CBC revealed anemia in 15 patients (27%), leucocytoses – in 34 patients (59,5%), ESR increasing – in 47 patients (82,4%); sputum examination for acid fast bacilli was positive in 7 patients (12,2%), X-ray showed obliteration of

costophrenic angle on right side in 28 patients (49,1%), on left side in 23 (40,3%) and on both side in 6 patients (11,4%). Opacity was homogenous. Thoracocentesis revealed pleural fluid < l L in 28%, 1-2 L in 33,3% and > 2 L in 38,7% of patients. Pleural fluid showed prevalence of lymphocytes in 12 (21,1%), neutrophils in 28 (49,1%), atypical cells in 10 (17,5%) and hemorrhagic fluid in 17 cases (29,8%). Pleural biopsy revealed PE due to malignancy in 20 cases (35,1%). Clinical diagnosis were made: parapneumonic effusion – in 9 patients (15,9%); effusion due to malignancy – in 20 patients (35,1%); effusion due to cardiovascular insufficiency (CVI) – in 14 (24,5%); Tuberculous plural effusion – in 14 patients (24,5%).

Based on the result of investigations, 14 (24,5%) patients were referred to TB department, 20 cases (35,1%) were consulted in Oncology department, 20 patients (35,1%) were successfully treated and discharged and 3 (0,05%) patients died.

Conclusion. Therefore, investigation revealed that the most often reason of PE in the routine therapeutic practice was malignancy (primary lung or pleural cancer or metastatic). PE also may become the initial manifestation of TB. Unilateral PE due to CVI was more often than bilateral. Microscopy shown strong prevalence of lymphocytes in TB pleural fluid, neutrophils – in parapneumonic PE, hemorrhagic character of plural fluid – in cases of malignancy and TB. The larger volume of fluid accumulated in malignant and CVI PE, with prevalence of transudate characteristic of pleural fluid. Cases of parapneumonic PE demonstrated the most positive prognoses of the complete recovery.

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