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Title: Procalcitonin (PCT) and C-reactive protein (CRP) as markers of the differential diagnosis of severe community acquired pneumonia (sCAP)

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Body: Aim: to optimizate the tactics to sCAP depending on the etiological factors including levels of PCT and CRP. Methods. From 27 patients (pts) who were admitted to the intensive care with sCAP (age - 57,85±2,58) diagnosis was confirmed at 24 pts (the main group). Methods included clinical, laboratory, instrumental, microbiological, bacteriological. Results. According to etiological factor study group was divided into 2 subgroups: 1 - 19 pts with bacterial sCAP, 2 - 5 HIV-positive pts with sCAP, 4 of them had Pneumocystis sCAP, 1 - pneumococcal. In subgroup 1 of pts with bacterial etiology level of PCT and CRP were respectively 12,85±2,91 ng/ml (normal - up to 0,1 ng / ml) and 204,49±20,47 mg / l (normal - up to 10 mg/l). In HIV-infected patients with Pneumocystis jirovecii PCT level was slightly above normal and was 0,35±0,12 ng/ml, and CRP level was normal (8,9 mg/l). 3 patients were excluded from the study with severe heart failure, acute myocardial infarction and pulmonary neoplasm. There level of PCT was within normal limits (0,079±0,033 mg/ml), and CRP level was 34,38 mg/l. Conclusions: PCT and CRP can be used as markers of etiologic of severe CAP: 1) at increasing of PCT up to 10-15 ng/ml and CRP up to 180-220 mg / it should be regarded as bacterial sCAP and continue antibiotic therapy; 2) at slight increasing of PCT (up to 0,2-0,4 ng / ml) and normal CRP it is value to exclude immunodeficiency state and optionally assign a specific therapy including antipneumocystic; 3) at normal levels of PCT regardless of CRP diagnostic search should be continue to exclude other pathology, which could mimic the sCAP.