

right parts: the number of parameters increased from 3 to 6.

6. In case of drug eluting stents in group of patients with myocardial infarction at the second visit to doctor the most reliable in hypokinesia was impairment of anterior left descending part (distal area): $p = 0.03$

7. Patients with diabetes mellitus most frequently visited the physician: in case of drug eluting stents by the second year, while similar patients with stents without drug eluting coverings presented by the fourth year ($p = 0.002$).

COMPLEX DIAGNOSIS OF NOSOCOMIAL PNEUMONIA IN SURGICAL PATIENTS — ROLE OF CLARA CELL PROTEIN AND SURFACTANT PROTEIN D

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The objective of the investigation was to estimate the informativity of plasma Clara cell protein (CCP) and surfactant protein D (SPD) in the diagnosis of nosocomial pneumonia in surgical patients.

MATERIALS AND METHODS. The observational study in ICU ventilated septic patients with peritonitis (70%), pancreonecrosis (25%) and mediastinitis (5%) was done in 2010–2015. Nosocomial pneumonia was diagnosed according to the Russian National guidelines. ARDS was diagnosed and staged according to the V.A. Negovsky Research Institute criteria. Plasma CCP and SPD were measured on day 0, 3 and 5 by the immunoenzyme assay (BioVendor, USA). Patients were treated according to the international guidelines. Data were statistically analyzed by STATISTICA 7.0, ANOVA and presented as median and 25 to 75th percentiles (ng/ml); $P < 0.05$ was considered statistically significant. Areas under the receiver operating (ROC) curves were calculated.

RESULTS. 65 patients were enrolled (out of 312 screened). Patients were assigned into groups: NP + ARDS ($n = 43$, 43 ± 4.9 years old, M/F 39/4, mortality 23%); NP ($n = 22$, 40 ± 5.1 years old, M/F 20/2, mortality 18%); no NP ($n = 25$, 42 ± 5.1 years old, M/F 22/2, mortality 17%). Groups were comparable in APACHE II and SOFA scores on the baseline. In patients with NP caused by *Pseudomonas aeruginosa* plasma CCP was significantly lower at all points than in the patients with no *Pseudomonas aeruginosa* detected. Plasma CCP on day 0 had a good capacity for the diagnosis of *Pseudomonas aeruginosa* NP: CCP

on day 0 ≤ 17.5 ng/ml yielded a sensitivity of 92.7% and specificity of 72.0% (AUC 0.84; 95% CI 0.713 to 0.926; $P = 0.0001$). In the NP + ARDS group SPD was higher at all points than in the NP group. Plasma SPD on day 0 > 111.2 ng/ml yielded a sensitivity of 68.2% and specificity of 92.3% (AUC 0.85; 95% CI 0.684 to 0.945; $P < 0.0001$) for diagnosing ARDS in NP. P/F ratio on day 0 < 280 yielded a sensitivity of 94.1% and specificity of 76.9% (AUC 0.89; 95% CI 0.744 to 0.952; $P < 0.0001$) and EVLWI on day 0 > 8.3 ml/kg yielded a sensitivity of 94.1% and specificity of 92.3% (AUC 0.92; 95% CI 0.810 to 0.982; $P < 0.0001$) for the diagnosis of ARDS in NP. A complex ROC analysis (for SPD in the group of patients with P/F < 280 and EVLWI > 8.3) yielded a much better diagnostic accuracy of SPD: cutoff > 93.7 ng/ml, sensitivity 81.0%, specificity 100.0% (AUC 0.96; 95% CI 0.817 to 0.998; $P < 0.0001$).

CONCLUSIONS. A complex approach – CCP ≤ 17.5 ng/ml + [P/F < 280 , EVLWI > 8.3 , SPD > 93.7] presents as a sensitive and highly specific method for diagnosing NP and ARDS in surgical patients.