

CORTISOL UTILITY IN SEVERE COMMUNITY-ACQUIRED PNEUMONIA (SCAP) PROGNOSIS

O.Omelyanenko, A. Makarevich

First Department of Internal Diseases, Belarusian State Medical University, Gorodetskaya St.,
11-1-28, 220125 Minsk, Belarus

Background: Elevated serum total cortisol (TC) levels in critically-ill patients revealed relationship with severity of critical illness as well as risk of death. We hypothesized that the evaluation of adrenal function could provide prognostic information in SCAP patients requiring intensive care unit (ICU) admission. **Aim:** The aim of the present study was to investigate TC levels relationship with in-hospital outcomes (in-hospital mortality (IHM), length of in-hospital stay, duration of ICU stay), need for invasive mechanical ventilation (IMV) and vasopressor support (VS). **Methods:** 20 ICU patients with proven SCAP CURB-65 class 3, 4 were enrolled to the study. Control group included 16 comparable healthy volunteers. Serum basal TC was measured within the first 24 hours after admission and at day 8. **Results:** Increasing CAP severity was associated with increased TC values both on admission and 8th day ($r=0,87$; $p=0,011$ and $r=0,88$; $p=0,019$ respectively). Their levels at 1st and 8th days revealed statistical difference in CURB-65 class 3 and 4 patients ($p=0,033$ and $p=0,048$ respectively). TC on admission and 8th day values demonstrated statistically significant correlation with IHM ($r=0,86$; $p=0,011$ and $r=0,88$; $p=0,021$ respectively) and were higher in non-survivors than those in survivors [median][1377 vs 865 nmol/l, $p=0,033$ respectively] at 1st and 8th days [823 vs.387 nmol/l, $p=0,049$ respectively]. TC levels correlated with need for VS ($r=0,87$; $p=0,012$ on admission and $r=0,88$; $p=0,021$ at 8th day respectively) and showed higher concentrations in patients requiring VS compared with those with stable haemodynamics both at 1st [1377 vs 865 nmol/l, $p=0,034$ respectively] and 8th days [823 vs.387 nmol/l, $p=0,049$ respectively]. Duration of ICU stay correlated with TC values on admission ($r=0,89$; $p=0,019$). **Conclusions:** Elevated serum TC in SCAP is associated with disease severity and could be used for identifying severe CAP patients at high risk of mortality, prediction of duration of ICU stay and need for VS.