

THE IMPACT OF INTRA- AND POSTOPERATIVE ALBUMIN LEVELS AS A BIOMARKER OF DELIRIUM AFTER CARDIOPULMONARY BYPASS: RESULTS OF AN EXPLORATORY STUDY

A. Baranyi, H.-B. Rothenhäusler

Psychiatry, University of Medicine of Graz, Graz, Austria

Introduction: Delirium is a frequently under-recognized finding in post-cardiopulmonary bypass patients that is potentially reversible but often associated with short-term complications, increased mortality and prolonged hospitalisation.

Aims: In this prospective study the frequency of delirium after cardiac surgery with cardiopulmonary bypass (CPB) was determined. Furthermore, we investigated the impact of intra- and postoperative levels of albumin as a biomarker of delirium.

Methods: 34 patients who underwent elective CPB at the Department of Cardiac Surgery, Ludwig-Maximilians-University of Munich, Germany, were enrolled in this prospective study. During the Intensive Care Unit (ICU) stay and shortly after discharge from the ICU, delirious state was evaluated daily using the Delirium-Rating-Scale. Albumin was assayed pre-anaesthesia, immediately after induction of anaesthesia, at the beginning of the heart-lung-apparatus period, immediately before the opening and 5 minutes after the opening of the aortic clamp, 24h and 48h postoperatively and on the day before discharge.

Results: After CPB, a clinical significant delirious state was observed in 11 patients (32.4%). The albumin level decreased during the surgical intervention and increased postoperatively with a maximum level at the time of discharge. CPB patients with delirious state showed a significantly lower albumin level 24h and 48h postoperatively than those without delirium.

Conclusions: A postoperative delirium is a frequently observed finding in post-CPB patients. A low levels of postoperative albumin seems to be an useful biomarker to identify patients with high risk of delirious state after CPB.