Comparison of different schemes of analgosedation in patients with severe traumatic brain injury in the postoperative period

Y. V. Volkova, K. Y. Sharlai, K. G. Mikhnevych
Kharkiv National Medical University, Kharkiv, Ukraine

Purpose - compare different methods of analgosedation with using dexmedetomidin in patients with severe traumatic brain injury.

Materials and methods. 80 patients were diagnosed with severe traumatic brain injury. Patients in the 1st group (n=40) had analgosedation with morphine and sodium oxybutyrate, and patients in the 2nd group (n=40) were additionally treated with dexmedetomidine. The dynamics of concentration of stress markers (insulin, cortisol, glucose), HOMA index, autoantibodies to brain antigens, restoration of consciousness by the Glasgow coma scale (GCS), duration of the artificial lungs ventilation (ALV) were determined.

Results. It was found, that in the 2nd group the reduction of the intensity of stress reactions was occurred 3-4 days earlier. It was found that analgosedation with using dexmedetomidin can reduce the peak of autoantibody concentration of S-100 protein, neurospecific enolase and total cerebral antigen ($p < 0.05$). In the 2nd group the restoration of consciousness by the GCS was faster by 24.3% the duration of ALV was less by 21.2%, and a frequency of pneumonia was less by 14,3% than in patients in the 1st group.

Conclusions. The use of dexmedetomidin may reduce an intensity of stress and autoimmune reactions in patients with severe traumatic brain injury, accelerate a restoration of consciousness by the GCS and reduce the duration of ALV.