Introduction:
Changes in hormonal status in patients with unresponsive wakefulness syndrome (UWS) remains poorly understood.

Methods:
f275 patients in UWS were examined at the period from 2007 to 2017. 152 patients (115 men) with TBI and 123 patients (63 men) after hypoxia. ACTH, cortisol, TSH, free T3 and T4, STH, prolactin and natriuretic peptide were studied in the period from 2 to 4 months UWS. In men, the level of total testosterone, LH and FSH was additionally studied. The obtained data was compared with the UWS outcome in 6-12 months (CRS-R scale assessment).

Results:
None of the studied hormones of the hypothalamic-pituitary-adrenal axis were a reliable criterion for predicting the outcome of UWS. Most often and consistently was revealed a tendency of disrupt the rhythm of cortisol secretion, with higher rates in the evening hours. The average value of STH was higher in men with the consequences of head injury who had recovered consciousness than in those who remained in UWS. Significant decrease in testosterone levels, regardless of age, was found in patients with a consequence of TBI. Mean levels of LH were higher in patients with TBI and hypoxia who remained unconscious than in patients who later restored consciousness. The average level of FSH was higher in patients who had recovered consciousness. The increase of natriuretic peptide level was observed both in patients who remained in chronic UWS and in those who restored consciousness.

Conclusion:
no certain endocrine background, characterising this category of patients was found. Violations of some hormones secretion rhythms, in particular, cortisol can be considered usual for UWS patients, especially in patients with TBI. The study was funded by the Russian Foundation For Basic Research (RFBR) project number 19-29-01066/2019

References:
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