

## MATHEMATICAL SUBSTANTIATION OF THE MAIN SYMPTOMSCHOICE IN DIAGNOSTICS OF NATAL INJURYCONSEQUENCES OF THE CERVICAL SPINE

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We have studied 217 charts of the children treated in the surgical department of the Republican Mother and Child Center that have a diagnosis of a chronic rotational subluxation of C1. All the sick children underwent x-ray examination of C1 through the open mouth, a rheoencephalographic procedure. As a result of systematization of complaints, disease anamnesis, objective examination and results of instrumental survey methods, 27 factors related to the disease were collected.

The task was to find out the most important factors determining the severity of the disease.

Algorithm for solving the task:

- study of tables of initial experimental data and measures of tightness of linear regression between factors;
- construction, analysis of correlation matrices, splitting of factors into pleiads;
- application of expert methods - direct ranking and weighting factors of importance;
- tabulation of weakly correlated factors.

The mathematical analysis led to reduction the dimension of the factor space from the initial 27 to 5 units without changing the information capacity.

### **Conclusions:**

As a result of the calculations, we have identified 5 factors carrying the main information load in the case of a rotational subluxation of the C1 vertebra. These factors were: data from the rheoencephalographic study, perinatal encephalopathy in the anamnesis, the age of the child, visual impairment, the presence of complications such as vertebrobasilar insufficiency, syncope, tension headache.

Based on these five factors, it is planned to build a probabilistic model for the severity of the disease.

## BEA SCORE STUDY AND CORRELATIONS WITH THE SURVIVAL OF SURGICAL POSITION CONCLUSIONS

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**Purpose:** To evaluate the applicability of Baseline Event Anticipation score (BEA), as a prognostic factor for complications in cases of cirrhotic patients.

**Material and Methods:** Population chosen for the study was represented by patients suffering from cirrhosis, being evaluated through BEA prognostic score sensibility, using the online formula. (<http://hepatitis-delta.org/physicians-and-scientists/calculator>).

**Results:** The lot of operated patients where 54, with an average age of  $43.4 \pm 4.3$  years; 53% of them were male and 47% female. All patients had Azygo-Portal Devascularization Hassab-Kaliba, histologically distributed as: micronodular hepatic cirrhosis - 24 (44.4%) macronodular- 16 (29.6%) and micro-macronodular - 14 (25.9%). In the analysis was a prevalence of the BEA-B score - 21 cases (38.9%), followed by 17 cases (31.5%) with BEA-A score and 16 cases (29.6%) with BEA-C score. After surgery 7 patients had 15 complications: early (6) and late (9), surgical (3) and therapeutic (12). Comparing the results, there is a direct correlation,  $r = 0.233$  of the BEA-C score with the incidence of complications, and a decrease in BEA-A and BEA-B patients.

**Conclusions:** This retrospective study was conducted in a specialized center with a reduced sample size, it demonstrates the prognostic utility of the BEA score and apparently requires care that will improve perioperative recovery, and will reduce morbidity.