II. CLINICAL PROBLEMS

COMPARATIVE EVALUATION OF THE COMBINED CEREBRAL — CRANIAL TRAUMA IN CHILDREN AND ADULTS

D. Tcholakov, S. Dyankov

The combined acute cerebral-cranial trauma (CACCT) is still an actual and difficult problem in neurotramatology. The majority of the nowadays traumatologists report the increase of the percent of the patients with CACCT in the recent years (2, 3, 6, 8). The age factor has certain influence on the final stage of the development of this disease (1, 4, 5, 7).

Presuming the anatomic and physiological features of the childish organism and that of the adults in various age we had for an object of the present study to evaluate comparatively the CACCT of patients from these two age groups.

Our study was based on the analyses and evaluation of 360 clinical investigations of patients with CACCT; 256 of the examined people were children between 1 and 14 years, whereas the rest 104 were adults over 60 years old. CACCT was 22.5% from all examined children and 29% from the adults with cerebral-cranial trauma. The relatively more frequent cases in adults was perhaps due to the weaker and slower reflectory activity as a result of the developed involutive changes. As a whole, the high percent of CACCT in both groups shows the significance of the problem for the patients. The etiological moments and their frequency were almost the same for the two investigated groups of patients. Most often were the transport accidents, followed by the house ones and the sport ones for the children and labour traumas for the adults. In comparison with the isolated cerebral-cranial traumas the combined ones had a prolonged and heavier development with mutual hardening of the traumatic syndromes. The latter very often made the clinical status quite uncertain. The frequency of the various combinations in both age groups according to our clinical material was different. Thus, in children most often were traumas combined with traumatical disorders of the extremities (127 cases), followed by thoracal (72), facial-mandibular (68) and abdominal (43); as for the adults most often were the combinations with thoracal traumas (57 cases), then those of the extremities (40), abdominal (17) and cerebro-vertebral (13). The cited cases illustrated the more frequent affecting of the extremities in children and thorax in adults over 60 years old. Analysing the multiple traumas we concluded the more organs were affected the harder was the recreation period and the development of the trauma. 3 traumas combined were established in 79 children and 25 adults. These combinations had usually a very prolonged and heavy course. The thoracal-abdominal component of such traumas tended to a special heaviness and uncertain recreation. Traumatic shock was established in 33 children and 16 adults. It was characteristic for both age groups that the shock had a masked course, without a manifested erectile phase and a prolonged deafness. According to our study, though not so big in number, the traumatic shock in children (49 cases) had a rela-

tively lighter course, the arterial hypotension in the majority of the cases did not reach serious levels and by applying an immediate treatment with endovenous transfusions the shock could be easier overgone and influenced. As for the adults the shock had a more prolonged course and its treatment needed greater efforts from the reanimation staff, having in mind also the former and accompanying somatic diseases.

The acute respiratory insufficiency (ARI) was the first and most important reanimation problem for CACCT. We established ARI in 52 of our patients — 35 children and 17 adults. The ARI was heavier and prolonged with the heavier CACCT. Most complex and serious development of ARI was investigated with a combined thoracal trauma. In such cases ARI was aspiratory-obturatory. The children with ARI were usually set to intubation (23 cases); tracheostomia was applied only once. The proper treatment of the upper respiratory tract tended to better results against ARI. According to our opinion the ARI in children was easier influenced than that of the adults. 17 patients among the adults were with ARI; tracheostomia was applied to 9 of them. We prefer and apply upper tracheostomia.

Our data show that the traumatic coma was oftenly prolonged (averagely over 1 hour) in comparison with the patients suffering from isolated cerebral-cranial trauma. As a result of the changed sensitiveness and hyporeflectory ability in the initial period the local and neurological symptoms could be masked and only the professional clinicist can diagnose them in their dynamics. Due to similar reasons the diagnosis of the acute surgical abdomen is very difficult and requires an active examination together with eventual diagnostical operations.

According to our study most serious for the prognosis of CACCT were the first hours and days after the trauma. All this requires an expressed operative and diagnostical activity. We presume that the prognosis of CACCT in adults was problematic. Thus, the mortality in the children group was 5.5%, while in the group of adults it was 7.7%.

Because of the early complications and possible diagnostical mistakes a collaboration between various specialists was very often required. In conclusion we have to point out that CACCT in adults contribute to greater number of complications, surprises and risks in comparison with the children.

REFERENCES

1. Арнаудов, Д., и др. *Мед. арх.*, 1971 № 9, 45—53. — 2. Астрожников, Ю. В. *Вопр. нейрохирург.*, 1959, № 6, 46—48. — 3. Григорьев, М. С Сочетанная черепномозговая травма. Волго-Вятское книжное издательство, 1977. — 4. Звонков, Н. А., Л. Б. Лихтерман, В. Н. Толстопятов. *Ж невропатол. и психиатр. им. Корсакова,* 1975, № 3, 342—348. — 5. Каплан, А. В Травматология пожилого возраста., М., Медицина, 1977. — 6. Кючуков, Н., и др. *Мед. арх.,* 1971, № 9, 73—86. — 7. Klein, M. R. Neuro-chirurgie infantile Paris, 1966. — 8. Reding, R., G. Lang. In: Schädel-Hirm-Trauma und Kombinationsverletzungen. 1977, 228—264.

СРАВНИТЕЛЬНОЕ ИССЛЕДОВАНИЕ КОМБИНИРОВАННОЙ ЧЕРЕПНО-МОЗГОВОЙ ТРАВМЫ У ДЕТЕЙ И ПОСТРАДАВШИХ В ПОЖИЛОМ И СТАРЧЕСКОМ ВОЗРАСТЕ

Д. Чолаков, С. Дянков

РЕЗЮМЕ

Проведено сравнительное исследование комбинированной черепно-мозговой травмы у пациентов различного возраста: у детей от одного года до четырнадцат лет и у пожилых старше шестидесяти лет. Анализируются частота, причины и клиническое течение этого острого нейрохирургического заболевания.