Prevalence, clinical features and accompanying signs of post-traumatic headache in children

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Key words: *mild traumatic brain injury, children, chronic post-traumatic headaches, dizziness.*

Summary. *The aim of the study was to investigate the prevalence and clinical features of headaches and their accompanying signs in children with mild traumatic brain injury, as well as to evaluate their changes over time.*

Material and methods. The research involved two groups of 4–16 year-old children: the case group of 301 children who had experienced a single mild traumatic brain injury, and the control group – 301 children who had suffered from any other mild body injury without head trauma. Groups were matched according to gender, age, date of admission to hospital. The period between the date of trauma and examination was at least one year (median 7 months). Standardized questionnaires were sent by post to parents from both groups. Parents were asked about character, frequency, dizziness and concomitant symptoms. In total, 102 matched pairs were analyzed.

Results. During the year before the filling in the questionnaires 114 (57.3%) parents indicated headaches: 64 (62.7%) in the case, and 50 (49%) in control group. Frequent (≥8 days per month) headaches prevailed in children with mild traumatic brain injury (p=0.039); however, their prevalence decreased from 43.8% to 12.5% (p=0.01) with increasing time interval between the date of trauma and the inquiry. By the character, duration, intensity of the headaches, none of the features (except dizziness) showed any difference between the groups. Thirty-three (51.6%) parents from the case and 16 (32%) from the control group indicated that dizziness accompanied headaches (p=0.036). Forty-five (44.1%) parents from the case group and 28 (27.5%) parents from the control group indicated that dizziness appeared separately from headaches (p=0.013). According to the data for the last month before the inquiry, there was no statistically significant difference between both groups when estimating the dynamics in time.

Conclusions. Headaches are not more prevalent in children with mild traumatic brain injury, compared to children with other mild body injuries. The frequency of headaches, as well as the prevalence of dizziness in children with mild traumatic brain injury decreases with time.

Introduction

Chronic recurrent headache is common in children and adolescents. An epidemiological study by B. Bille showed that one-third of children up to 7 years of age, and one-half of adolescents experienced headaches (1). Most frequently, these headaches correspond to the criteria of migraine of tension-type headache: such headaches recur in one out of ten children aged 5–15 years (2). Many children and adolescents suffer from frequently recurring headaches (3).

It is common to think that headache may also occur following cerebral or neck trauma. In such cases headache is accompanied by dizziness, attention disorders, nervousness, personality changes, and insomnia. The combination of these symptoms is known as the post-traumatic syndrome, and headache is indicated as the most prominent feature of this syndrome (4). According to the international classification of headaches, there are the following diagnostic criteria for post-traumatic headache:

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A. Headache corresponding to criteria C and D, typical characteristics not defined;
B. Headache attributed to mild traumatic head injury (MTHI) that corresponds to the following criteria: the patient has not lost consciousness or has been unconscious for less than 30 minutes; Glasgow coma scale e" 13; symptoms and/or characteristics of brain concussion;
C. Headache occurs within 7 days following trauma;
D. Headache remains for more than 3 months after trauma (4).

Dizziness following MTHI may accompany post-traumatic headaches, but may also occur as a separate symptom. Immediately after cerebral trauma resulting in hemicontusion of the labyrinth and vestibular paresis, the following symptoms occur: vertigo, nausea, vomiting, and spontaneous nystagmus; these symptoms may also occur several days or weeks after trauma, and manifest themselves as short-term recurrent fits of vertigo provoked by head movements. Psychogenic dizziness brought about by different emotional shocks is characterized as unclear undefined vague dizziness; the fear of falling down is emphasized, but nausea, vomiting, and nystagmus are absent (5).

Nausea and vomiting caused by mild traumatic head injury and being either a separate symptom and/or a constituent part of post-traumatic dizziness, sometimes reflect the presence of intracranial hypertension (6, 7) or may be a constituent part of migraine-type headache.

Head injuries in children are common: in the USA, every year 180-300 out of 100,000 children experience head traumas (8). According to many sources, approximately 80-90% of such traumas are mild (9–13). In the US, every year approximately 90,000 children are hospitalized due to mild traumatic head injury (14, 15). These worrying numbers stimulate the studies in possible consequences, especially the long-term ones, of traumas in children, and the search for ways to alleviate these consequences (16).

Still, the results of the clinical studies of patients with head and neck traumas, recently published in literature, raise doubts about the physical objectivity of the symptoms of the post-traumatic syndrome, especially in case of mild traumatic head injury (16,17). The ongoing discussion requires re-evaluation of the objectivity, the duration, the causes, risk factors, and tactics of post-traumatic headaches and concomitant symptoms in children.

The aim of the study was to check the prevalence and clinical features of headaches and their accompanying signs in children with mild traumatic brain injury as well as and to evaluate their changes over time.

The objectives of the study:
1. To determine the prevalence of headache and dizziness, and the peculiarities of concomitant symptoms in children who experienced mild traumatic head injury.
2. To determine the character of dizziness in children with mild traumatic head injury.
3. To evaluate the changes in headache and concomitant symptoms over time.

Material and methods

Three hundred and one children (aged 4–16 years) who experienced mild traumatic head injury for the first time were selected for the study from patients who applied for urgent help to Kaunas University of Medicine Hospital (KUMH) and Kaunas Red Cross Hospital during the period of 1997–2001. The study included patients with isolated head trauma with the duration of the loss of consciousness not longer than 15 minutes, who had no neurological symptoms, and no injuries to other parts of the body except for minor skin injuries (abrasions or bruises), and who were treated at outpatient units or were admitted to inpatient units for no longer than 7 days. All children underwent skull radiology of the head, and a part of the subjects underwent computerized tomography of the head. The aforementioned examinations did not reveal any pathological changes.

In addition to that, a control group was formed, which consisted of 301 children who presented to KUMH and to Kaunas Red Cross Hospital emergency room or outpatient department with mild injuries of other types (e.g. limb bruises, abrasions, sprains, etc.) without head trauma. The control group was adjusted to the studied group by sex, age (±2 years), and the date of application (±2 weeks from the respective date of application in the studied group). Parents or caregivers of both groups were (by post) familiarized with the inquiry, asked to participate in the study (informed consent), and received a standardized questionnaire on the previous and present health status of the children: headaches and dizziness, concomitant symptoms, and the frequency of complaints during the last year before the inquiry (subsequently – during the last year) and during the last month before the inquiry (subsequently – during the last month). The inquiry also included questions about family history of chronic diseases and the child's learning at school in order to evaluate the comparability of the two groups. In order to avoid biased attitude to the experienced trauma, the introductory letter to parents did not explicitly mention the trauma. Upon reception of the

filled questionnaire, a second questionnaire was sent. When analyzing, the questionnaires from both groups were excluded if the analysis showed that children experienced additional head traumas unknown to the investigators, if the questionnaire was not filled completely, or if it did not have a pair in the other group. After the final selection, 102 strictly matched pairs were made. The study was performed during 2002–2003. The period between the trauma and the inquiry was not shorter than 1 year (median time – 27 months). The protocol, the inquiry, and the agreement to participate in the study were adapted to children according to a similar study in the adult population (17) and were approved by the Committee of Bioethics of Kaunas University of Medicine.

Statistical analysis. In order to compare the distribution of the studied characteristics, c^2 criterion and non-parameter Mann Whitney U test were used in the analysis of headache. The comparison of mean values was performed using Student's t test. The analysis of the data on matched pairs was performed with the help of McNemar test. The analysis of dizziness included the calculation of odds ratio and its 95% confidence interval. Logistic regression was used to evaluate the influence of age on dizziness and headache. Statistical conclusions were made when the significance level was 0.05. The data were processed using SPSS and EPIINFO statistical software packages.

Results

In total 204 answers to the questionnaires were analyzed – 102 in each group. The minimal age at the time of trauma was 4 years, maximal – 16 years. Mean age and ± standard deviation was 11±3.1 years. Each group consisted of 28 girls (27.5%) and 74 boys (72.5%). The comparison of the distribution of the age of boys and girls at the time of trauma (<7 years, 7–11 years, >11 years) showed a statistically significant difference (p=0.014). Every second boy (52.7%) was older than 11 years of age, and two-thirds (67.9%) of girls were 7–11 years of age. Mean age ± SD in boys of the MTHI group was 11.3±3.2 years, and in girls – 9.9±2.7 years (p=0.03). There was no difference between the MTHI and the control groups concerning demographic, and general health characteristics of the child and the family.

Out of all parents, 114 (57.3%) ones positively answered the question "has the child experienced headache during the recent year?": 64 (62.7%) in the MTHI, and 50 (49%) in the control group. The analysis of matched pairs using McNemar test did not show any difference between the groups concerning the prevalence of headache.

The distribution of the frequency of headache is presented in Table 1. The comparison of the distribution using the rank Mann-Whitney U test showed statistically significant differences (p=0.03): in children of the MTHI group, headaches were more frequent (mean ranks in the MTHI and control groups were, respectively, 63 and 50).

We compared the frequency of headache in children (who, according to their parents, had headache) of the MTHI and control groups, taking into account the time after the trauma (1 year or more than 1 year). Since there were few cases of frequent headaches, they were included into one category; thus headaches according to frequency were differentiated into 3 levels: headache during the last year experienced less than 1 day per month, 1–7 days per month, and 8 days per month and more frequently (Table 2). The findings showed a statistically significant difference between the MTHI and control (p=0.039), when the interval between the trauma and the date of filling of the questionnaire was one year. The distribution of the frequency of headache in questionnaires filled later did not differ between the two groups. However, a statistically significant (p=0.028) difference was found when comparing the distribution of headaches in the MTHI group at one year after trauma and later. In children who had headache 1 year after trauma, frequent (8 days per month or more frequently) headaches were more common in

Table 1. **Comparison of the frequency of headache in children of the MTHI and the control groups**

How frequently have you experienced headache during the recent year?	Control group		MTHI group	
	n	%	n	%
Less than one day per month	26	52.0	22	34.4
1-7 days per month	20	40.0	29	45.3
8-14 days per month	0	0.0	8	12.5
More than 14 days per month	2	4.0	2	3.1
Every day or nearly every day	2	4.0	3	4.7
Total	50	100	64	100

Table 2. **Comparison of the frequency of headaches in children of the MTHI and the control groups with respect to the period between the trauma and the date of the inquiry**

How frequently have you experienced headache during the recent year?	1 year after trauma				≥2 years after trauma			
	MTHI group		Control group		MTHI group		Control group	
	n	%	n	%	n	%	n	%
Less than one day per month	4	25	9	56.3	18	37.5	17	50
1-7 days per month	5	31.2	6	37.5	24	50	14	41.2
8 days per month or more frequently	7	43.8	1	6.2	6	12.5	3	8.8
Total	16	100	16	100	48	100	34	100

the MTHI group (43.8%), but with time they decreased to 12.5% (p=0.01). The time-related distribution in the control group was similar.

We analyzed the peculiarities of headaches (n=114) according to the time of the day, duration, intensity, localization, direction of spreading, character, concomitant dizziness, nausea, vomiting, and sensitivity to light and/or sound. In addition to that, we studied differences between the studied and the control group according to pain triggers (food, climbing stairs, sudden turning of the head, coughing, sneezing, defecation, mental stress, and irregular sleep) (Table 3). An attempt was made to differentiate headaches according to their peculiarities into migraine- type and tension-type headaches, but headaches were of a mixed character and difficult to classify.

Statistically significant difference was found only with respect to dizziness accompanying headache during the last year. Dizziness was experienced by 33 (51.6%) children in the MTHI group, and by 16 (32%) children in the control group (p=0.036).

We additionally analyzed dizziness during the last year irrespective of headache. Dizziness was experienced by 45 (44.1%) children of MTHI, and by 28 (27.5%) children of the control group (p=0.013). The prevalence of dizziness in the MTHI group was higher by 16.6%, compared to the control group (95% CI: 7.4%; 26%). The odds ratio when comparing the groups was 2.21 (95% CI: 1.19; 4.28). Of 45 children in the MTHI group who experienced dizziness, 28 children (62.2%) experienced systemic-type dizziness (feeling as if being in a carousel, feeling as if being on the ship deck, dizziness accompanied by nausea, and dizziness accompanied by vomiting), compared to 17 out of 28 children in the control group 60.7%. There was no difference between the two groups concerning character, frequency, and causes of dizziness.

If, according to parents' answers, 64 (62.7%) children from the studied group, and 50 (49%) children in the control group experienced headache during the last year, headache during the last month was experienced by 35 (34.3%) children from the MTHI group, and 30 (29.4%) children from the control group. The analysis of changes in headache from the last year to the last month showed a statistically significant change of the situation in both groups the MTHI group (McNemar test p=0.001), and the control group (McNemar test p=0.001). During the period from the last year to the last month, the percentage of children with headache in the MTHI group decreased by 28% (95% CI: 18.5%; 38%), and in the control group - by 19.6% (95% CI: 9%; 30%). There were no statistically significant changes in the prevalence of headaches during the last month. One-half (50.9%) of all children who experienced headache during the last year did not have any headache during the last month. No statistically significant differences between the two groups concerning the presence and frequency during the last month were found either. The age of children in the MTHI group did not have any statistically significant influence on the frequency of headache or the prevalence of headache or dizziness.

With respect to the period between the date of the trauma and the date of the filling of the questionnaire, the questionnaires were distributed the following way: the ones filled one year after the trauma (50 questionnaires, 24.4%), and the ones filled 2-5 years after the trauma (154 questionnaires, 75.6%). No statistically significant association between the period from the trauma to the filling of the questionnaires with respect to the prevalence of headache or dizziness was found in either the MTHI or the control groups. The analysis of the frequency of headaches in the MTHI group showed that the prevalence of frequent headaches decreased

Table 3. **Comparison of the peculiarities of headaches in the MTHI and the control groups**

Peculiarities of headaches	Groups				p
	MTHI (n=64)		Control (n=50)		
	cases	%	cases	%	
Duration of headaches:					
less than 30 minutes	26	40.6	19	38.0	
30 minutes to 2 hours	24	37.5	15	30.0	
2 to 48 hours	4	6.3	6	12.0	
constant headache	4	6.3	4	8.0	
headache of a varying character	6	9.4	6	12.0	>0.05
Time of the day when headache occurred:					
in the morning	3	4.7	1	2.0	
at noon	6	9.4	8	16.0	
in the evening	19	29.7	13	26.0	
at night	1	1.6	0	0	
various times	35	54.7	28	56.0	>0.05
Severity of headaches :					
mild	26	40.6	23	46.0	
medium	27	42.2	19	38.0	
severe	11	17.2	8	16.0	
insupportable pain	0	0	0	0	>0.05
Location of headaches:					
one side of the head	26	40.6	22	44.0	
both sides of the head	38	59.4	28	56.0	>0.05
Pains felt together with headache in other body sites	6	9.4	4	8.0	>0.05
Character of headaches:					
pressing	36	56.3	31	62.0	
throbbing	12	18.8	8	16.0	
usually pressing, throbbing during highest severity	16	25.0	11	22.0	>0.05
Nausea and /or vomiting during headache	17*	27.0	9	18.0	>0.05
Dizziness during headache	33	51.6	16	32.0	**=0.036**
Increased sensitivity to sound during headache	32	50.0	21	42.0	>0.05
Increased sensitivity to light during headache	21	32.8	12	24.0	>0.05
Headache increased when climbing stairs	27	42.2	25	50.0	>0.05
Headache induced by sudden turning of the head	19*	30.2	10	20.0	>0.05
Headache induced by coughing or defecation	12	18.8	9	18.0	>0.05
Headache induced by mental stress	31	48.4	17	34.0	>0.05
Headache induced by irregular sleep	19	29.7	12	24.0	>0.05

* 63 subjects.

with the increase in the period of time between the trauma and the filling of the questionnaire: 7 out of 16 children (43.8%) whose questionnaires were filled one year after the trauma experienced headaches 8 or more days per month, compared to 6 out of 48 (12.5%) children whose questionnaires were filled later (p=0.013).

in the control group, the respective numbers were 1 out of 16 (6.3%) and 3 out of 34 (8.8%).

Discussion

The results of our study showed that the prevalence of headache among children who experienced MTHI did not differ from that of the children who experienced orthopedic traumas, and was approximate to the data on the prevalence of headaches in the general population of such age presented in literature (1-3). Thus, we agree with the authors who state that headache, as an objective constituent part of the post-concussion syndrome, may be arguable.

Literature data on chronic post-traumatic headaches and other physical symptoms following MTHI are controversial. A part of the published findings support the approach that even MTHI results in sufficiently serious sequelae and conditions the child's physical symptoms (such as headache, dizziness, nausea, etc.) and cognitive-behavioral disorders (18-24). The emerging data that medium and severe brain injuries exert more damage to the brain of younger children lead to the issue of how much threat MTHI can pose on small children (25-28). According to the findings of our study, the age of children who experienced MTHI did not have any statistically significant influence on the incidence of headaches or the prevalence of headache or dizziness.

On the other hand, during the recent years a number of new findings have been published, requiring the reassessment of the extent to which mild traumatic head injury can cause organic damage to the brain manifesting itself through neurological symptoms, and to what extent the post-concussion symptoms are dependent on psychogenic factors (29–30). A critical review of the findings of the performed studies highlighted methodological problems that result in suspiciousness concerning the results of the studies on the sequelae of mild traumatic head injury (16). The results are difficult to interpret and compare due to different and not always clarified selection criteria and the chosen method of the study, as well as due to confusing factors that may distort the findings of the study. Some authors ascribe mild and medium traumas to the group of mild traumas, while others choose too small numbers of subjects, and still others do not assign any control group or select such group erroneously. For instance, A. C. Hawley (24) analyzed complaints of the parents of 97 children who sustained brain traumas (49 of them sustained MTHI), and performed a comparison with the control group of 31 healthy children. The results showed that headache and dizziness among those who sustained MTHI were more frequent compared to the control group. However, in this study deviation is possible due to the fact that children who experienced not only brain but also combined traumas (which may have been an additional physical and mental stress to children and their parents) were not excluded from the studied group. In 1999 W. C. G. Overweg-Plandsoen (31) studied children aged 4–14 years; the study included 50 children with mild traumatic head injury, and 244 children with fractures of collarbone or arm. The final post-selection findings when comparing two groups (22 children each) 2 years after the trauma showed that children with MTHI statistically reliably more frequently experienced headaches, dizziness, and fatigue. However, the questionnaire of these authors mentioned only the experienced head trauma, which may have influenced the findings. The authors who studied the influence of biased attitude to complaints following MTHI proved that expectation of symptoms significantly increases the amount of complaints (32–34). An interesting study was performed by M. Callaghan and I. Abu-Arafeh: the predominant opinion about possible influence of head injury conditioned the fact that upon the occurrence of headache, the parents of children who had experienced brain trauma significantly earlier applied for medical help (on the average, after 13.3 months), compared to parents of children who had not experienced such traumas (on the average, after 20.5 months) (35).

For maximum objectification of the obtained findings, keeping to the following six criteria offered by P. Satz was proposed (36–37): 1) a clear definition of mild traumatic head injury, excluding more severe head injuries; 2) a control groups of children who did not experience head trauma; 3) control according to risk factors prior to the trauma; 4) perspective follow-up following the trauma; 5) usage of standardized tests; and 6) inclusion of not less than 20 subjects into the study. Our case-control study corresponded to five criteria proposed by P. Satz out of six (our study was of retrospective character). It must be noted that our questionnaires and study protocols were adapted to children according to the model for adults by D. Mickeviciene, H. Schrader (17), which allowed for expecting coherent results during the prospective study, since the results of the retrospective and prospective studies performed by these authors were identical (17, 38). In addition to that, the superiority of our study is that the selection criteria were very strict (all cases of repeated traumas were excluded, and the pairs were strictly matched by age, sex, and the date of the trauma). We tried to avoid the formation of biased attitude in parents towards the possible relationship of the complaints to the experienced head injury; for this reason we did not mention it in the first questionnaire. The control group was

composed of children who experienced other mild body injuries without head trauma. We think that this is more objective than a control group from general population, since our controls, as well as the subjects, experienced stress – trauma, pain, and hospital environment, which may be and additional influencing factor. In addition to that, such control group allows for avoiding hyperactivity as another possible influencing factor, since P. E. Bijur (39) determined that children who experienced any traumas had higher hyperactivity indices compared to their peers who did not experience any traumas. Thus, from the methodological perspective, our results should not raise any doubts.

A possible shortcoming of our study may be that we used questionnaire data. The main argument is that we thus were able to include a large number of patients, this method is cheap and convenient, and acceptable to others, since it is more complicated for parents to arrive to the healthcare institutions for clinical interview, compared to filling questionnaires at home. However, postal inquiry poses methodological problems since there is a lack of flexibility, and the researcher may not be completely sure that the subject precisely understood the question (40). On the other hand, the influence of the researcher is eliminated. Such partiality cannot be avoided when using other types of clinical interview either, and the diagnostics of primary headaches even during the prospective studies is always based on retrospective data presented by the patient, and subjectivity here is inevitable (41).

In the vast majority of children in both groups, the duration of headaches was not longer than 2 hours, and they were mild or medium in severity. According to localization, character, and sensitivity to physical or mental stimuli, the headaches may be classified as mixed – migraine-type and tension-type, since the distribution of their peculiarities is approximately 50:50. On the other hand, an attempt to group and classify the peculiarities of headache according to strict criteria of migraine-type or tension-type headaches for each patient failed. This is understandable, since the International Classification of Headaches also accepts that headaches in children are not as clearly defined as in adults. Although some authors point out (35) tension-type headaches are more typical after brain traumas (actually, the group studied by these authors included head injuries of various severity), while other authors agree that there is a possibility of the presence of mixed headaches combining migraine and chronic tension-type headaches (3). In addition to that, the influence of pre-morbid headaches and other psycho-social factors cannot be excluded, since the pathogenesis of post-traumatic headaches is quite complicated (35).

The findings of our study show that headaches in children who experienced mild traumatic head injury did not differ from those in children who did not experience head injuries concerning either the severity or the peculiarities (except for dizziness). This again raises doubts about the direct and specific influence of MTHI on headache, since even the international classification of headaches includes a comment stating that "the relationship between headache and trauma is easily determined if headache occurs immediately or several days after the trauma. However, the diagnosis is much more complicated if headache occurs several weeks or months following the trauma, especially if the majority of these pains are similar to tension-type headaches (in 80% of cases) that are very common, and the patient may sometimes suffer from headache resembling migraine with or without aura" (4).

Dizziness (either separate from headache or accompanying it) also appeared to be more frequent in children who experienced mild traumatic head injury compared to children who did not experience such injury. There was no difference between the studied and the control groups concerning the character, the frequency, and the causes of dizziness. On the other hand, dizziness is an ambiguous symptom, and frequently patients themselves have difficulty defining it, the same words describe dizziness and vertigo. In Lithuanian, the term dizziness is applied to two different conditions: vertigo developed due to labyrinth dysfunction, characterized by strong sense of revolving, nausea, vomiting, and nystagmus, and a much more common psychogenic vague sense of instability. Dizziness is especially subtle symptom in childhood. Acute dizziness is frequently associated with head injury, while medium acute or chronic dizziness may be the consequence of emotional stress or fatigue (42). Practice shows that children call dizziness any malaise – being zonked out, fatigue, sleepiness, and even headache, and therefore the complaints of dizziness expressed by the children's parents should be evaluated cautiously, taking into consideration the possible psychogenic factor that can distort the results. However, such complaints should be evaluated as a possible non-specific definition of insufficiently good health condition typical of children who experienced MTHI, and the analysis of the dynamics of this symptom over time, as well as in relation to other complaints should be performed.

According to our findings, the "age" of the trauma (i.e. the period between the date of the trauma and the date of the filling of the questionnaire) did not have any influence on the prevalence of complaints of headache or dizziness. In other words, the prevalence of headaches and dizziness was independent of the fact

how long ago the trauma occurred. A positive influence of time on frequent headaches was observed: frequent headaches were found to be more prevalent in the studied group compared to the control group, but the later the inquiry was performed, the fewer frequent headaches were registered. These results show that after MTHI, the physical symptoms tend to disappear over time. Similar results were also obtained by other authors: the longer the period after the trauma, the fewer the symptoms, especially the physical ones (24, 43, 44). This may be due to the fact that patients most clearly remember most severe and recent headaches, and, during the inquiry, possibly subjectively give prominence to the influence of head injury on headaches (39, 45).

Conclusions

Headache is not more common among children who experienced mild traumatic head injury, compared to children who experienced other mild traumas. Among children who suffer from headaches, frequent and very frequent headaches are more common in those who experienced mild traumatic head injury; the same applies to dizziness, either occurring separately from headache or together with it. However, the frequency of headaches and the prevalence of dizziness decrease over time.

Potrauminių galvos skausmų paplitimas tarp vaikų, klinikinės ypatybės bei gretutiniai simptomai

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Raktažodžiai: lengva galvos smegenų trauma, vaikai, lėtiniai potrauminiai galvos skausmai, galvos svaigimas.

Santrauka. Tyrimo tikslas. Nustatyti galvos skausmų bei svaigimo paplitimą tarp vaikų, įvertinti šių simptomų kitimą.

Metodika. Tirtos dvi grupės 4–16 metų vaikų: tiriamoji grupė – 301 vaikas, pirmąkart patyręs lengvą galvos smegenų traumą, kontrolinė – 301 vaikas, patyręs kitokį lengvą kūno sužalojimą. Vaikų grupės suderintos pagal lytį, amžių bei kreipimosi į gydytojus datą. Laikotarpis tarp traumos ir apklausos datų ne trumpesnis kaip vieneri metai, vidurkis – 27 mėnesiai. Tėvų apklausa apie vaikų galvos skausmus, jų pobūdį, pasikartojimo dažnį, svaigimą, gretutinius simptomus vyko paštu naudojant standartizuotą klausimyną. Atrinktos 102 suderintos poros.

Rezultatai. Galvos skausmus, kurių pasireiškė per paskutinius metus iki anketos pildymo, nurodė 114 (57,3 proc.) tėvų: 64 (62,7 proc.) tiriamosios ir 50 (49 proc.) kontrolinės grupės vaikų. Grupės pagal galvos skausmų paplitimą nesiskyrė. Tarp vaikų, kuriems po traumos galvą skaudėdavo praėjus metams, retesnių skausmų dažnis nesiskyrė, dažni (aštuoni arba daugiau dienų per mėnesį) galvos skausmai dažnesni buvo patyrusiems lengvą galvos smegenų traumą ($p=0,039$). Kuo ilgesnis laikotarpis tarp traumos ir apklausos, tuo tiriamosios grupės galvos skausmo dažnis mažėjo, t. y. nuo 43,8 iki 12,5 proc. ($p=0,01$). Grupės pagal galvos skausmų pobūdį, trukmę, intensyvumą, gretutinius reiškinius (išskyrus svaigimą) nesiskyrė. Svaigimą ir galvos skausmą nurodė 33 (51,6 proc.) tiriamosios ir 16 (32 proc.) kontrolinės grupės vaikų tėvai ($p=0,036$); galvos svaigimą nepriklausomai nuo skausmo nurodė 45 (44,1 proc.) tiriamosios ir 28 (27,5 proc.) kontrolinės grupės vaikų tėvai ($p=0,013$); duomenys statistiškai reikšmingi ($p<0,05$). Galvos svaigimo pobūdis tarp grupių nesiskyrė. Vertinant simptomų kitimą, grupės paskutinio mėnesio duomenimis, iki apklausos pagal priklausomą ir (ar) nepriklausomą nuo galvos skausmo svaigimą nesiskyrė.

Išvados. Galvos skausmai nėra labiau paplitę tarp vaikų, patyrusių lengvą galvos smegenų traumą, palyginus su kitas lengvas kūno traumas patyrusiais vaikais. Galvos skausmų dažnis, svaigimo paplitimas lengvą galvos smegenų traumą patyrusių vaikų grupėje, laikui bėgant, mažėja.

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