



EPIDEMIOLOGICAL PROFILE OF VOMITING IN MILD INFANT HEAD TRAUMA
PERFIL EPIDEMIOLÓGICO DO VÔMITO EM TRAUMA CRANIOENCEFÁLICO LEVE INFANTIL
PERFIL EPIDEMIOLÓGICO DEL VÓMITO EN TRAUMA CRANEOENCEFÁLICO LEVE INFANTIL

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ABSTRACT

Objective: to analyze the epidemiological profile of vomiting in case of mild Cranioencephalic Infant Trauma in a Reference Hospital. **Method:** this is a quantitative, descriptive, cross-sectional study with documentary analysis in medical records, determining the sample for convenience. In the analysis of the variables, the data were divided into: 1st part focused on the socioeconomic data and the 2nd part, on the data of the trauma with the vomit, through a questionnaire. The data was stored and analyzed using Microsoft Excel 2013 software, and presented in the form of tables. **Results:** a total of 121 patients, with male prevalence, one year old and with fall were obtained. A total of 379 vomiting were found, with at least one vomit. It is reported that no antiemetics were used in 83.47% of the cases. **Conclusion:** there was a lack of administration of antiemetics and a lack of studies on vomiting as the main symptom of mild childhood TBI, providing new research. **Descriptors:** Head and Brain Injuries; Vomiting; Preschool; Child Care; Health Profile; Antiemetics.

RESUMO

Objetivo: analisar o perfil epidemiológico do vômito em caso de Trauma Cranioencefálico leve infantil em um Hospital de Referência. **Método:** trata-se de estudo quantitativo, descritivo, transversal, com análise documental em prontuários, determinando-se a amostra por conveniência. Dividiram-se, na análise das variáveis, os dados em: 1ª parte voltada aos dados socioeconômicos e a 2ª parte, aos dados do trauma com o vômito, por meio de um questionário. Armazenaram-se e analisaram-se os dados com o auxílio do *software Microsoft Excel 2013*, e se apresentaram em forma de tabelas. **Resultados:** obteve-se o total de 121 pacientes, com prevalência masculina, de um ano de idade e com queda. Encontrou-se o total de 379 vômitos, apresentando um vômito, no mínimo. Informa-se que não foram utilizados antieméticos em 83,47% dos casos. **Conclusão:** constataram-se a falta de administração de antieméticos e a escassez de estudos sobre vômito como sintoma principal do TCE leve infantil, proporcionando novas pesquisas. **Descritores:** Traumatismos Craniocerebrais; Vômito; Pré-Escolar; Cuidado da Criança; Perfil de Saúde; Antieméticos.

RESUMEN

Objetivo: analizar el perfil epidemiológico del vómito en caso de Trauma Craneoencefálico leve infantil en un Hospital de Referencia. **Método:** se trata de un estudio cuantitativo, descriptivo, transversal, con análisis documental en prontuarios, determinándose la muestra por conveniencia. Se dividieron en el análisis de las variables los datos en: 1ª parte dirigida a los datos socioeconómicos y la segunda parte, a los datos del trauma con el vómito, por medio de un cuestionario. Se almacenaron y analizaron los datos con la ayuda del *software Microsoft Excel 2013*, y se presentaron en forma de tablas. **Resultados:** se obtuvo el total de 121 pacientes, con prevalencia masculina, de un año de edad y con caída. Se encontró el total de 379 vómitos, presentando un vómito, como mínimo. Se informa que no se utilizaron antieméticos en el 83,47% de los casos. **Conclusión:** se constató la falta de administración de antieméticos y la escasez de estudios sobre vómito como síntoma principal del TCE leve p, proporcionando nuevas investigaciones. **Descriptores:** Traumatismos Craneocerebrales; Vómitos; Preescolar; Cuidado del Niño; Perfil de Salud; Antieméticos.

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INTRODUÇÃO

Head trauma is also known as TBI, and is widespread as any and all aggression of the skull cap normality, and can be damaged or not. It can be reached any age, from falls, automobile accidents or physical aggression, through physical violence.¹

Only the TBI is classified as mild from the moment a neurological exam is performed, and the Glasgow Coma-ECG Scale is applied, with scores of 15 to 13, as well as through imaging tests, the main ones being computed tomography and x-ray, proving that there is no depth and extension of the lesion, as well as signs and symptoms where vomiting can occur frequently, regardless of the episodes presented.²

Thus, the need to address this issue, which is seldom stimulated in the lines of health research, and the search for updating health data. It is reported that vomiting, by itself, does not characterize the TBI, nor does it occur in the opposite, with this, it is sought to present the epidemiological profile of children's victims of mild TBI with the intention that, understanding the type of profile, the academic community can be made aware and thus prevent future health actions. It thus reflects on what mild TBI causes in children and what the consequences of vomiting in a mild TBI.

OBJECTIVE

- To analyze the epidemiological profile of vomiting in cases of mild Infant Head Trauma in a Reference Hospital.

METHOD

It is a study of documentary analysis, through the search of medical records, in addition to the use of a quantitative, descriptive and cross-sectional study. The quantitative study, as a primordial function, is the description of quantified characteristics of populations as a whole, organizations or other specific collectivities. Generally, a large number of variables are used, using sampling techniques to be representative.³

In this study, the medical records of the children and infants of both sexes, ranging from zero to four years old, who were attended at the study hospital, with a closed diagnosis of mild TBI, and who had vomiting after the trauma or during the during hospitalization, from January 2014 to January 2017, in the state of Pernambuco-PE. The sample was determined by means of a non-probabilistic sampling procedure, of the "convenience" type.

The medical records of minors with zero to four years of age who had a diagnosis of mild traumatic brain injury, regardless of the causative factor

that provided it, who presented vomiting after trauma or during hospitalization, and whose medical records were accessible and with duly completed data.

The medical records of people who were outside the age range of zero to four years, those who had a questioned registry of TBI, those who did not present mild TBI, those who did not present vomiting at any moment, as well as the medical records that were not found in the file.

The study variables were based on the objectives of the study, and were therefore analyzed to describe the epidemiological profile of the study population: sex; age; naturalness; provenance; period of hospitalization; cause of trauma; amount of vomiting; presented vomiting after TBI; presented vomiting during transportation and presented vomiting during hospitalization; Glasgow Coma Scale (GCS), admission and discharge; complications presented; diagnostic exams; treatment and use of antiemetics, both in the study hospital and in the transfer hospital, and identification of the medication prevalent for this purpose.

After data collection, the data was stored and analyzed in spreadsheets of the Microsoft Excel 2013 software. This data was grouped and cataloged by means of a computer program according to the needs and / or complexities imposed by the problem. Data was analyzed after correction of typing errors by absolute number and percentages. Finally, we tabulated the data in a table format, with this; they were discussed according to the literature consulted.

The requirements and precepts established by Resolution 466/12 of the National Health Council, which deals with the guidelines and norms regulating research involving human beings, were approved by the ethics committees according to the numbers of CAAE 68543817.8.0000.5192 and 68543817.8. 3001.5198, respectively.

RESULTS

A total of 121 patients were obtained who met the study objectives. Sixty-six male patients (54.54%) and 55 female patients (45.45%), ranging from one day-old case (0.8%) to 13 four-year cases (10.74%), with a prevalence of 47 cases with one year of age (38.84%), predominantly from the city of Recife in 37 cases (30.57%), followed by Jaboatão dos Guararapes, with 13 cases (10.74%), and Olinda, with ten cases (8.26%). It is revealed that, among the causes, the fall was the most incident factor in the cases found related in 106 patients (87.6%); household accidents, with nine cases (7.43%); aggression, with five cases (4.13%) and trampling, with one case (0.8%). A total of 136 examinations were performed in the total (100%), where the X-ray prevalence prevailed in 66 cases (54,54) and computed tomography in 61 cases

(50.41%) and, in both cases, was not performed no type of examination at the study site (1.65%). The Glasgow Coma Scale was analyzed for a total of 15 patients, with 87 cases at admission and 55 at

hospital discharge, but it was not evaluated in 27 cases at the patient's entrance and in 68 cases at hospital discharge.

Table 1. Distribution of the Glasgow Coma Scale in mild childhood cranioencephalic trauma with vomiting in a hospital of high complexity. Recife (PE), Brazil, 2014-2017.

ECG Entry	N	%	ECG EXIT	N	%
15	87	71.9	15	55	61.98
14	04	3.3	14	00	00
13	03	2.4	Not available	68	56.19
12	01	0.8	Total	123	118.17
Not available	27	22.3			
Total	122	100.7			

It was shown, in front of all patients with TBI, classified as mild, the total of 379 vomiting in all cases studied, with at least one vomiting

prevalent in 40 cases (33.05%); there was only one case of 13 repetitions of vomiting (0.8%).

Table 2. Distribution of the occurrence of vomiting in mild traumatic brain injury in a hospital of high complexity. Recife (PE), Brazil, 2014-2017.

	N	%
1x	40	33.05
2x	27	22.3
3x	02	1.65
4x	10	8.26
5x	07	5.78
6x	06	4.95
7x	04	3.30
8x	03	2.47
9x	02	1.65
10x	02	1.65
11x	01	0.8
13x	01	0.8
Total	105	86.66

In the case of vomiting, it was observed that only 32 cases (26.44%) were found in the vomiting, but in 115 cases, vomiting occurred after trauma (95.04%) and in eight cases did not occur vomiting in the patients (6.61%). Twenty-one cases of vomiting (17.35%) and 102 cases where it did not occur (84.29%) were found during transport, and during hospitalization at the study site, the presence of vomiting in 26 cases (21.48%) and 97 cases did not find this symptom (80.16%).

(3.30%), but one day was predominant, with 78 cases (64.46%).

The results obtained were 67 cases assigned to their residence (55.37%), two cases that were transferred (1.65%), and in 53 cases, the destination was not identified at hospital discharge (43.80%).

DISCUSSION

It is known that one of the main causes of infant death is caused by cranioencephalic trauma, however, there is a discrepancy between the adult and the child, because the mortality rate is lower when compared to the adult.⁴

Cranioencephalic trauma occurs at any age, being of greater risk in the children's public and prevalent in children under one year of age, a phase that is related to the greatest discoveries and curiosities necessary for its proper maturation and growth, during these discoveries, the child is exposed to real dangers, considering the complications and risks of life that they go through in their daily life.⁵⁻⁷

The results of the neurological examination, by means of the Glasgow Coma Scale (ECG), are evaluated, so that head injury is considered mild,

A minimum of a few hours was observed in 32 cases (26.44%) and three days in three cases

being 13 to 15 after the time of 30 minutes; fainting in the time of up to 30 seconds, being able to present absence of memory during, before or after the event of the trauma.¹

It is explained that childhood mild TBI is recurrent and caused by falls in any environment, the most frequent being domestic and predominant in males, as many authors report in their studies due to motor incoordination or to the practices and attitudes of greater physical activity, often of contact, providing greater risks to the lives of children who, because of their habitat, feel more freedom to explore the area, with less concern and action of their caregivers or parents.^{5,7-9}

It is understood that vomiting is one of the most important signs and symptoms, as it is evidenced in patients during, before or after the trauma, as described by other epidemiological profile surveys.⁹ It is necessary to observe this patient within 24 hours for x-ray examinations or computerized tomography or magnetic resonance imaging, with the purpose of analyzing the skull cap and evidencing some type of fracture to perform possible interventions, however, it is important that health professionals know the correct exams so that there is no unnecessary expense and not expose the child to ionizing radiation and biological risks.^{1,10}

Vomiting is also important in deciding which examination should be performed on the patient, such as if two or more emetic episodes occur when at least one computed tomography.^{1,10}

The number of vomiting was varied between at least one vomiting per patient, up to thirteen repetitions in only one case, being recurrent after trauma, and post-traumatic brain injury vomiting (PTBIV) "are more common in children because of transient vestibular impairment and may start immediately or hours after the trauma, occurring in single or multiple episodes. Thus, while fractures would be caused by contact forces, nausea and vomiting would be due to the movement of trauma".¹

Other signs and symptoms may occur concomitantly with vomiting in cases of mild infant TBI such as drowsiness, fainting, and headache, which indicate the need for health care professionals and prevention of possible avoidable complications.⁸⁻⁹

Among the complications, hematomas and fractures were observed, confirming the relationship between vomiting and fractures, as the existing literature states, coming to the reality presented by Pereira, who states: "The association between cranial fractures and intracranial lesions is not as strong in adults. Studies show that vomiting is not an isolated risk factor for patients suffering from mild TBI".¹

In this study, it has been shown that, in a normal way, this public spends a few hours in observation and is sent home to relieve the burden of hospitalized patients unnecessarily or in precarious places to meet the needs of this type of clientele. They are advised to return to the hospital if symptoms occur, often without being given any type of medication, as an antiemetic, for the treatment of vomiting.⁸

It was found that the primary medication of choice was bromopride, being a D2 dopaminergic receptor and, according to Anvisa, "It is indicated in cases of nausea and vomiting of central and peripheral origin (surgeries, metabolic, infectious and problems secondary to the use of medicines)", therefore, its use is effective and safe in antiemetic treatments in the pediatric cases, according to its studies.^{1,12}

CONCLUSION

The epidemiological profile of mild traumatic head trauma with vomiting in a hospital of high complexity in the city of Recife-PE was identified in this study and, due to the scarcity of scientific articles on the subject addressed, difficulties were found regarding literature.

Thus, the profile of this clientele was cut, considering the importance of investigating vomiting as a major symptom of mild infant brain injury, allowing further research on the subject with the reapplication of the research instrument that meets the needs of population health.

It is concluded that the use of antiemetics in the case of presenting nausea and / or vomiting in pediatric patients is notorious, due to the need for immediate observation after cranioencephalic trauma, and with this, there is a need for awareness of the care and health professionals and their relatives about the recurrent signs and symptoms and the factors that cause TBI.

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