

149 - EPIDEMIOLOGY INDEX STUDY IN ELDERLY PATIENTS WITH TRAUMATIC BRAIN INJURY ADMITTED TO A HOSPITAL IN WESTERN PARANÁ IN 2009

RODRIGO DANIEL GENSKE
MÁRIO JOSÉ DE REZENDE
JULIANA HERING GENSKE

Universidade Estadual do Oeste do Paraná (UNIOESTE), Cascavel, Paraná, Brasil
rodrigogenske@terra.com.br

INTRODUCTION

TBI is defined as any type of injury that causes anatomical injury, functional impairment, or both, involving bony skull and brain (FARAGE et al., 2002).

The incidence of TBI is very high in the traumatized, and this is an aggravating factor in the prognosis of trauma victims. Thus, there is a constant indicating that the prognosis of traumatized, often depends on the severity of their head injury (SOUZA; REGIS, KOIZUMI, 1999, OLIVEIRA; IKUTO; REGNER, 2008).

TBI is classified as level of consciousness, determined by the Glasgow Coma Scale (GCS), the first six hours after trauma as mild (indices of 13 to 15), moderate (indices 9-13) and severe (rates of 3 to 9). The assessment involves the observation of three parameters: motor responses, verbal and eye opening (FERREIRA, 2007; OLIVEIRA; IKUTO; REGNER, 2008).

This range is used also as an indicator of prognosis and possibility of death, to join other variables such as age, abnormal motor responses, CT findings, pupillary abnormalities and episodes of hypoxia and hypotension also be considered for such purposes (OLIVEIRA; IKUTO; REGNER, 2008). It is noteworthy that the neurological damage do not occur completely in the moment of impact, consequences may arise later. The recovery is generally better in younger patients, in cases of mild TBI injuries can be sustained minimal or not present long-term sequelae (FERREIRA, 2007). Therefore, these Traumatic brain injury is classified into primary and secondary schools. Primary brain injury occurs as a direct result of mechanical trauma to the brain tissue, which may cause diffuse or focal. These two mechanisms are commonly associated in one patient, however, generally there is a predominance of one type. And after the initial trauma, secondary brain injury occurs, characterized by systemic physiological responses through a cascade of biochemical mediators that initiates a continuous breaking of the cell membrane and ion exchange that promote brain injury (ANDRADE et al., 2009). Care neurointensive aim to protect the brain event that can cause secondary injury and worsen the clinical picture, increasing morbidity and mortality (FERREIRA, 2007).

The study aimed to outline the rate of elderly patients (over 60 years) traumatic brain injury admitted to the University Hospital of Paraná in 2009.

METHODS

This study was a cross-sectional initially consisted of collecting, from the book of records of hospital emergency room sector, ICU and Neurology, their record numbers and records of TBI admitted to the University Hospital of West Paraná (HUOP), in Cascavel - PR. Followed, then, from the registration number of each patient, the location of the records at the Service Medical Records and Statistics (SAME) of the hospital and confirmed by review of data from medical records of each patient.

Inclusion criteria consisted of diagnosis of TBI, admission made, and date of admission to 1 January 2009 to 31 December 2009, having as a criterion for exclusion the diagnosis of TBI and no previous hospitalizations or after the period mentioned above. The charts were reviewed, one by one, and their data were organized into table of Excel software (Microsoft Office 2007®) for subsequent statistical analysis. The variables analyzed included age, gender, severity, cause, time of admission and discharge or death. The severity of TBI was established using the scores of the Glasgow Coma Scale and categorizing them if this kind of trauma victims as mild, moderate and severe.

Statistical analysis was descriptive simple, using the software EpilInfo® Windows 2000 platform.

RESULTS

In total, 316 records of hospitalization for TBI in HUOP, 51 were excluded for not presenting incorrect information on the number of record by not allowing the location of the records, for not having a diagnosis of TBI and / or submit date outside the period of hospitalization chosen for the research. Thus, we analyzed 265 medical records that contained a diagnosis of TBI and is considered a representative sample of the population with acceptable error of 5%. Of these, 197 (74.34%) were men and 68 (25.66%) were women. The main cause of head injury was traffic accidents (19.63% motorcycle, automobile 11.70%, 11.32% run over) totaling 47.18%, followed by falls (31.70%) and aggression (9.06%).

TABLE 1 - Relationship of gender and deaths according to cause of TBI

CAUSE	WOMEN	MEN	DEATHS	TOTAL
Falls	20	64	10,71%	84
Bike	13	39	15,38%	52
Car	12	19	6,46%	31
Running over	11	19	10%	30
Aggression	2	22	0%	24
Other causes	10	34	9,09	44
TOTAL	68	197	-	265

Of the 265 charts reviewed, 232 (87.55%) were discharged, 26 (9.81%) died and 7 (2.64%) were not included or were transferred. Of the deaths, 25 were men and one woman.

Table 2 presents the frequency of TCEs as gender and age

TABLE 2 - Frequency (in%) of TCEs as age and gender

Age	F	M	General
0 – 15	38,24	22,96	26,89
16 a 30	30,88	27,04	28,03
31 a 45	25,00	18,37	20,08
46 a 59	04,41	19,90	17,05
60 ou mais	01,47	11,73	07,95
TOTAL	100,00	100,00	100,00

According to the Glasgow Coma Scale, 154 individuals (58.11%) had rates of mild TBI, 22 (8.31%) moderate TBI and 78 (29.43%) severe TBI, and 32% of those diagnosed with severe TBI, died. In cases recorded as a death, not included in the index of the GCS. Data for severity as the causes are described in the table below.

TABLE 3 - Distribution of data according to the cause and the Glasgow Coma Scale (in%)

Cause	light	Moderate	Serious	S/ iECGI*	Total
Moto	40,38	07,69	46,15	05,78	100,00
Auto	40,63	03,23	51,13	04,94	100,00
Cycling	91,6	08,33	00,00	00,07	100,00
Aggression	62,50	16,67	12,50	08,33	100,00
Fall	67,86	08,33	17,86	05,95	100,00
Running over	56,67	06,66	36,67	00,00	100,00

* No index Glasgow Coma Scale. Refers to records that were not in the score.

DISCUSSION

TBI is the leading cause of death in children and young adults in Western Countries. While the causes vary for each location, the main constitute of traffic accidents, falls and assaults (ANDRADE et al., 2009). Corroborating the findings of this study.

Of all hospitalizations for TBI in 2009, the hospital in which he conducted this research, 74.34% were male patients. This finding is similar to several studies that report the majority of TBI to be male, since they are more exposed to risk situations (IMAI, KOIZUMI, 1996; KOIZUMI et al. 2000; FEIJÓ; PORTELA, 2001; LORENZO; ALVES; ANDRADE, 2008; SOUZA; REGIS, KOIZUMI, 1999; MELO; SILVA, MOREIRA JUNIOR, 2004).

As for age, the highest incidence was youth aged 16 to 30 years (28.03%), followed by children and adolescents 0-15 years (26.89%), young adults 31 to 45 years (20, 08%) and from 46 to 59 years (17.05%) and lastly the elderly over 60 years (7.95%). That is, the young accounted for most of the people hospitalized for TBI, in agreement with other studies (FEIJO; PORTELA, 2001; MELO; SILVA, MOREIRA JUNIOR, 2004). However, Koizumi et al. (2000), noted in their study that, in São Paulo in 1997, most of the population victim of TBI comprised less than 10 years (20.3%), but since then statistically, young men of 20 29 years and 30 to 39 years (16.9% and 16.1% respectively).

In this study, a major cause of TBI was given to accidents involving means of transport, including motorcycle accidents, car, bike, and running over, totaling 47.18% of cases. Followed, even in fall (31.70%) and aggression (9.06%), meeting with the epidemiological study of Melo and Silva Moreira Junior (2004), which found that accidents involving means of transport and pedestrian accidents are the leading causes of hospitalizations in TBI, accounting for 40.7% of admissions, followed by assaults with or without arms (25.4%) and falls (24%), those involving more elderly patients over 60. However, the mechanism of injury most common in the study of Lawrence and Alves Andrade (2008), was trampling on 31.1% of cases, followed by falls from 25.0% of cases.

With respect to the scores of GCS, the mild trauma was the most frequent (58.11%), followed by severe trauma (29.43%) and moderate (8.31%). These data corroborate the findings in the epidemiological study of Souza, Regis and Koizumi (1999) that such incidences were found with rates of GCS as mild (50%), followed by severe (23.8%), moderate (17.5 %) and other missing information (8.8%). This incidence was found in a similar way in the study de Freitas, Jorge Ribeiro (2007), conducted with children 0-14 years.

Among the causes of TBI, this study accidents involving motorcyclists were those which led to more patients died. In a study by Souza, Regis and Koizumi (1999) the highest rate of mortality were pedestrians, followed by motorcycle accidents.

In sample analysis, the mortality rate was 9.81% of patients with traumatic brain injury progressed to death. The mortality rate for TBI that occurred during hospitalization in study de Souza, Regis and Koizumi (1999), was 18.6% of cases.

It was found that none of the victims of mild and moderate TBI died. The victims classified as severe TBI 32% died. Likewise, the study by Freitas and Jorge Ribeiro (2007), of 12 deaths from TBI in victims of 0 to 14 years, all had severe GCS. Still, the study of Melo and Silva Moreira Junior, these rates varied around 1% in mild TBI, 18% in moderate and severe in 48%. According to Imai and Koizumi (1996) in that there is an increase of GCS scores, there was less mortality percentages.

Despite the findings of this study show 32% of deaths due to severe TBI, it is believed that the number of deaths is even higher due to high rates of car accidents, and many victims died at or en route to hospital. To this end, the ECA is a social problem by making the necessary policies to prevent traffic and preventive programs aiming at preventing falls in older people, aiming to reduce costs to the public health system and reduce the morbidity and mortality from TBI.

CONCLUSION

Of the patients hospitalized in 2009, TBI, 7.95% were elderly, thus representing the lowest incidence. Since we have not cause any comfort, but highlights the need for strengthening of preventive programs aimed at the elderly population, seeking more and more, reducing the percentage shown in this study.

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Rua Monjoleiro, 69 Recanto tropical
Cascavel, Paraná. CEP: 85807 - 300
rodrigogenske@terra.com.br

EPIDEMIOLOGY INDEX STUDY IN ELDERLY PATIENTS WITH TRAUMATIC BRAIN INJURY ADMITTED TO A HOSPITAL IN WESTERN PARANÁ IN 2009

ABSTRACT

Traumatic brain injury (TBI) is the leading cause of death and disability in industrialized countries. Among the major reasons we can mention car accidents, pedestrian accidents, motorcycle accidents, assaults, falls and injuries by level of firearm. TBI is classified as level of consciousness, determined by the Glasgow Coma Scale (GCS) as mild, moderate and severe, according to motor responses, verbal and eye opening. Objective: To describe the rate of elderly patients (over 60 years) traumatic brain injury admitted to the University Hospital of Paraná in 2009. Methods: This study was conducted to review analysis of 265 medical records of patients diagnosed with TBI admitted to the University Hospital of Western Paraná (HUOP) between January and December 2009, where data were collected as the leading causes of TBI, severity according to Glasgow Coma Scale, age, gender, duration of hospital stay, and also mortality. Results: We found that victims of TBI, predominantly males, 74.34% and the main age group affected were young adults (16-30 years) with 28.03%, and elderly patients over 60 years, had the lowest rate of 7.95% involvement. Automobile accidents were considered the leading cause of TBI totaling 47.18%, followed by falls (31.70%) and aggression (9.06%), and the elderly, the main cause of the falls were very level. Depending on the severity, 58.11% of the victims had mild head injuries, 29.43% and 8.31% moderately severe. Conclusion: Among patients hospitalized in 2009, TBI, 7.95% were elderly, thus representing the lowest incidence. Since we have not cause any comfort, but highlights the need for strengthening of preventive programs aimed at the elderly population, seeking more and more, reducing the percentage shown in this study.

KEYWORDS: TBI, elderly, epidemiology.

ÉPIDÉMIOLOGIE INDEX ETUDE CHEZ DES PATIENTS AGES ATTEINTS DE LÉSION CÉRÉBRALE TRAUMATIQUE ADMIS DANS UN HOPITAL DE L'OUEST DU PARANA EN 2009

RÉSUMÉ

Traumatisme crânien (TCC) est la principale cause de décès et d'invalidité dans les pays industrialisés. Parmi les principales raisons, nous pouvons mentionner les accidents de voiture, les accidents de piétons, les accidents de moto, d'agressions physiques, chutes et des blessures selon le niveau d'arme à feu. TBI est classée au niveau de la conscience, déterminée par l'échelle de Glasgow (GCS) comme légère, modérée et sévère, en fonction des réponses motrices, verbales et l'ouverture des yeux. Objectif: Décrire le taux de patients âgés (plus de 60 ans) une lésion cérébrale traumatique admis à l'hôpital universitaire de Paraná en 2009. Méthodes: Cette étude a été menée pour examiner l'analyse de 265 dossiers médicaux de patients diagnostiqués avec un TBI admis à l'hôpital universitaire de l'Ouest du Paraná (HUOP) entre Janvier et Décembre 2009, où les données ont été recueillies dans les principales causes de TBI, sévérité selon l'échelle de Glasgow, l'âge, le sexe, la durée du séjour à l'hôpital, et la mortalité. Résultats: Nous avons constaté que les victimes de TCC, majoritairement des hommes, 74,34% et la tranche d'âge la plus touchée étaient de jeunes adultes (16-30 ans) avec 28,03%, et les patients âgés de plus de 60 ans, avait le plus faible taux de participation de 7,95%. Les accidents d'automobile ont été considérés comme la principale cause de TBI totalisant 47,18%, suivis par les chutes (31,70%) et de l'agression (9,06%), et les personnes âgées, la cause principale des chutes ont été très niveau. Selon la gravité, 58,11% des victimes avaient blessures à la tête légère, 29,43% et 8,31% à modérément sévères. Conclusion: Chez les patients hospitalisés en 2009, TBI, 7,95% étaient des personnes âgées, ce qui représente la plus faible incidence. Puisque nous n'avons pas causer de confort, mais souligne la nécessité de renforcer des programmes de prévention destinés à la population des personnes âgées, recherchent de plus en plus, la réduction du pourcentage indiqué dans cette étude.

MOTS-CLÉS: la CEA, les personnes âgées, l'épidémiologie.

EPIDEMIOLOGÍA ÍNDICE DE ESTUDIO EN PACIENTES ANCIANOS CON LESIÓN CEREBRAL TRAUMÁTICA INGRESADOS EN UN HOSPITAL DE LA REGIÓN OESTE DE PARANÁ EN 2009**RESUMEN**

El traumatismo craneoencefálico (TCE) es la principal causa de muerte y discapacidad en los países industrializados. Entre las razones principales se pueden mencionar los accidentes de tráfico, accidentes de peatones, los accidentes de motocicleta, agresiones, caídas y lesiones por nivel de arma de fuego. TBI es clasificado como nivel de conciencia, determinada por la Escala de Coma de Glasgow (GCS) como leve, moderada y grave, de acuerdo con las respuestas motoras, verbales y abrir los ojos. Objetivo: Describir el comportamiento de los pacientes de edad avanzada (más de 60 años) la lesión cerebral traumática ingresados en el Hospital de la Universidad de Paraná en 2009. Métodos: El estudio se llevó a cabo para revisar el análisis de 265 historias clínicas de pacientes diagnosticados con TCE ingresados en el Hospital de la Universidad del Oeste de Paraná (HUOP) entre enero y diciembre de 2009, donde los datos se recogieron como las principales causas de TBI, la gravedad de acuerdo a la Escala de Coma de Glasgow, edad, género, duración de la estancia hospitalaria, y también la mortalidad. Resultados: Se encontró que las víctimas de la LCT, en su mayoría varones, 74,34% y el grupo de edad más afectados fueron los adultos jóvenes (16-30 años) con 28,03%, y los pacientes mayores de 60 años, había la tasa más baja de 7,95% la participación. Los accidentes automovilísticos fueron la principal causa de lesión cerebral por un total de 47,18%, seguido por caídas (31,70%) y la agresión (9,06%), y los ancianos, las caídas la principal causa de la muy nivel. Dependiendo de la gravedad, el 58,11% de las víctimas tenían heridas leves cabeza, 29,43% y 8,31% moderadamente grave. Conclusión: Entre los pacientes hospitalizados en 2009, TBI, el 7,95% eran mayores de edad, lo que representa la incidencia más baja. Puesto que no tiene causa alguna comodidad, pero pone de relieve la necesidad de fortalecer los programas preventivos dirigidos a la población de edad avanzada, que buscan más y más, reduciendo el porcentaje se muestra en este estudio.

PALABRAS CLAVE: Tce, la epidemiología de edad avanzada.

ESTUDO EPIDEMIOLOGICO DO ÍNDICE DE PACIENTES IDOSOS COM TRAUMATISMO CRANIO-ENCEFÁLICO INTERNADOS EM UM HOSPITAL DO OESTE DO PARANÁ NO ANO DE 2009**RESUMO**

O traumatismo crânio-encefálico (TCE) é a principal causa de morte e sequela nos países industrializados. Entre as principais causas podemos citar acidentes automobilísticos, atropelamentos, acidentes motociclísticos, agressões físicas, quedas de nível e lesões por arma de fogo. O TCE é classificado conforme o nível de consciência, determinado pela Escala de Coma de Glasgow (ECGI) em leve, moderado e grave, de acordo com respostas motoras, verbais e de abertura ocular. Objetivo: Traçar o índice de pacientes idosos (acima de 60 anos) vítimas de TCE internadas no Hospital Universitário do Oeste do Paraná no ano de 2009. Métodos: No presente estudo foi realizada a análise de revisão de 265 prontuários médicos de pacientes com diagnóstico de TCE internados no Hospital Universitário do Oeste do Paraná (HUOP) entre janeiro e dezembro de 2009, onde foram coletados dados como as principais causas de TCE, sua gravidade segundo a Escala de Coma de Glasgow, idade, gênero, tempo permanência hospitalar e, ainda, índice de mortalidade. Resultados: Verificou-se que as vítimas de TCE eram predominantemente homens 74,34% e a principal faixa etária acometida foi de adultos jovens (16 a 30 anos) com 28,03%, sendo que os pacientes idosos, acima de 60 anos, apresentaram o menor índice de acometimento 7,95%. Os acidentes automobilísticos foram considerados a principal causa de TCE totalizando 47,18%, seguido de quedas (31,70%) e agressão (9,06%), sendo que nos idosos, a principal causa foram as quedas do próprio nível. Conforme a gravidade, 58,11% das vítimas tiveram TCE leve, 29,43% grave e 8,31% moderado. Conclusão: Dos pacientes internados no ano de 2009, vítimas de TCE, 7,95% eram idosos, representando assim, a menor incidência. Dado que não nos causa nenhum conforto, evidencia sim a necessidade da intensificação de programas preventivos voltados à população idosa, visando cada vez mais, a redução do percentual apresentado neste estudo.

PALAVRAS-CHAVE: TCE, idosos, epidemiologia