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Original Article

Evaluation of disability reports received in 2022

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Abstract

Aim: In this study, it is aimed to retrospectively examine the files of patients who applied to the Inonu University Faculty of Medicine, Department of Forensic Medicine Polyclinic between 01.01.2022 and 31.12.2022 and discuss them in the light of the literature.
Materials and Methods: 570 disability files that came to our polyclinic between 01.01.2022 and 31.12.2022 were included in our study. Data regarding the gender of the cases, their age at the time of the incident, the season in which the incident occurred, the localization of the injury, which bone was broken, which bones were broken more according to age, and the provisions of which regulations evaluated the disability rate, were scanned electronically. Data were analyzed with IBM SPSS 22 program.
Results: It was observed that 77% of the cases were adults (18-65 years old), 64.6% were men and 35.4% were women. It was observed that the most incidents occurred in the summer months and the least incidents occurred in the winter months. When bone fractures are examined by age groups, children most often survive the events without fractures. Vertebra and tibia-fibula fractures were most common in adults between the ages of 18-65. It was observed that vertebral fractures were more common in cases over the age of 65.
Conclusion: In the light of these data, we concluded that safety precautions should be taken by examining age and seasonal differences, and that physicians who intervene after the accident should direct their suspicions by knowing the possibilities.

Keywords: Forensic medicine, disability, age

INTRODUCTION

World Health Organization (WHO); It defined the deterioration of psychological, physiological or anatomical integrity, loss or decrease of function as a decrease in the body, and defined the person's inability to perform movements within accepted limits as a result of the prolongation of this deficiency as disability [1]. In our country, traffic accidents, effective action, work accidents, etc. The reports written as a result of determining the permanent damage to the person due to the trauma they experienced after the situations, upon the request of the judicial authorities or individuals, and calculating the disability that occurs by taking into account the regulations, are given names such as disability, handicap, disability report. The reason why the names given vary is due to the changing regulations regarding the year of the accident [1,2].

When we look at the distribution of the malfunctions given in the literature studies, the most common ones are limitation of movement, uncomplicated healed fractures, psychiatric malfunctions, gait disturbance, atrophy, fractures with complications, vertebral height loss, shortness, peripheral nervous system malfunctions, vertebral posterior element fracture, central nervous system malfunctions and cognitive malfunctions. malfunctions and paresis and plegia were observed [3].

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In the prepared reports, temporary incapacity periods as well as permanent/permanent incapacity periods are calculated. When calculating both temporary disability periods and disability rates, accident-related complications (surgery status, fracture healing, infections, etc.) should be taken into account. In a study conducted at Muğla Sıtkı Koçman University, it was observed that 87.4% of the cases underwent surgery due to accidents, 5% of the operated cases had their second and third surgeries, and complications such as fracture union and infections developed in 8% of the cases. For this reason, it is understood that the duration of temporary and permanent disability varies even if the malfunction of the cases is the same [4].

In our study, it was aimed to determine the characteristics of the cases such as age, gender, season of the incident, bone fractures, correlation of bone fractures with age range, and under which regulations they were reported.

MATERIAL AND METHOD

Approval was received from İnönü University Scientific Research and Publication Ethics Board with decision number 2023/5370 dated 12.12.2023. 570 disability files sent to İnönü University Faculty of Medicine Department of Forensic Medicine Polyclinic between 01.01.2022 and 31.12.2022 were retrospectively examined. Files for which a report was previously prepared, but the court or person requested a re-report with a different regulation, or files that were re-reported after additional documents were provided, were also included in the study. The files of patients whose files came to us but did not come for examination, or who had problems obtaining missing documents even if they were examined, were excluded from the scope. Psychiatric cases were not included in the statistics because sufficient data could not be accessed and the accessible diagnoses were not specific diagnoses such as general psychiatric examination.

In order to evaluate the different effects of traumas on a person and the correlation of the degrees of these effects with age, the age range of 1-18 for children, the age range of 18-65 for adults, and the age range of 65 years and above for the elderly, based on the data of the Turkish Statistical Institute, were used [5-7]. Gender, season in which the event occurred, location of the malfunction (lower extremity, upper extremity, head area, vertebra), which bone fractures occur according to age (neurocranium, vertebra, clavicle/scapula, radius/ulna, rib, pelvis, femur, tibia). /fibula) and which regulation was used to prepare the report (Regulation on Disability Assessment for Adults dated 20.02.2019, Regulation on Disability Criteria, Classification and Health Board Reports to be Given to Disabled People dated 30.03.2013, Regulation on Disability Determination Procedures dated 03.08.2013, Regulation on Disability Determination Procedures dated 11.10.2008 The information that took into account the Regulation on the Rate of Loss of Working Power and Earning Power in the Profession, Regulation on Special Needs Assessment for Children dated 20.02.2019) or the regulations were classified, coded and put into the SPSS 22 program and analyzed. Descriptive statistics and frequency tables of the data were created. Distribution of data used and other data; They were compared using Pearson Chi-Square and Linear-by-Linear Association tests.

RESULTS

It was observed that 64.6% of the 570 cases within the scope of the study were men and 35.4% were women. 18.7% of the cases were 1-18. It was observed that 64.6% of the 570 cases within the scope of the study were men and 35.4% were women. It was observed that 18.7% of the cases were between the ages of 1-18, 77% were between the ages of 18-65, and 4.3% were over 65 years of age (Table 1). It was observed that the events in the file occurred most in the summer (31.8%) and least in the winter (15.4%) (Figure 1).

The localization of the symptoms mentioned in the report of the applicants was examined. It was observed that the rate of those who applied to us without any malfunction was 2.8%, the most common malfunction localization was the lower extremity with 30.6%, and the upper extremity malfunctions came in second with 22.5% (Table 2).

When the person's body was examined for fractures and the correlation of fractures with age, it was seen that individuals between the ages of 1 and 18 most frequently survived the events without fractures, with 18.9%. Among those with fractures, the most common fractures were tibia or fibula. In individuals between the ages of 18-65, vertebral fractures were the most common (13.2%), while tibia or fibula fractures were the second most common (12.6%). Vertebra fractures were the most common (20%) in individuals over the age of 65 (Table 3).

While the provisions of the Regulation on Disability Assessment for Adults were taken into account in 49.12% of the files sent to us, it was observed that more than one regulation evaluation request was made in 17.7% of the files (Figure 2).

Table 1. Age range and gender participation

			Age			Total
			1-18	18-65	65-100	
Gender	Male	n	72	286	10	368
		%	12.6%	50.2	1.8	64.6
	Female	n	35	153	14	202
		%	6.1%	26.8	2.5	35.4
Total			107	439	24	570

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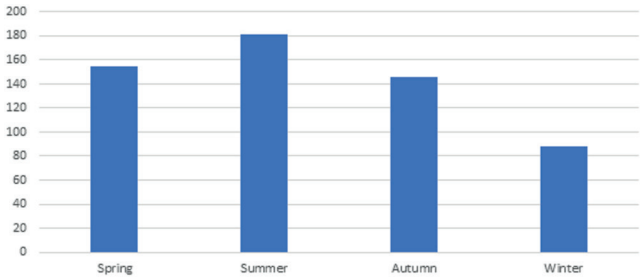

Figure 1. Season

Table 2. Damage localization

	n	%
Upper extremity	221	30.6
Lower extremity	163	22.5
Head	77	10.7
Vertebra	90	12.6
Other	152	20.8
No damage	20	2.8
Total	723	100.0

Table 3. Fractured bone and age correlation

			Age		
			1-18	**18-65**	**65-100**
Fractured bone	**Neurocranium**	**n**	14	38	3
		%	9.8	6.5	7.5
	Vertebra	**n**	4	78	8
		%	2.8	13.2	20
	Clavicula-scapula	**n**	12	31	2
		%	8.4	5.3	5
	Radius-ulna	**n**	5	53	6
		%	3.5	9	15
	Costa	**n**	4	38	5
		%	2.8	6.5	12.5
	Pelvis	**n**	8	31	5
		%	5.6	5.3	12.5
	Femur	**n**	16	50	2
		%	11.2	8.5	5
	Tibia-fibula	**n**	26	74	4
		%	18.2	12.6	10
	No fracture	**n**	27	76	1
		%	18.9	12.9	2.5

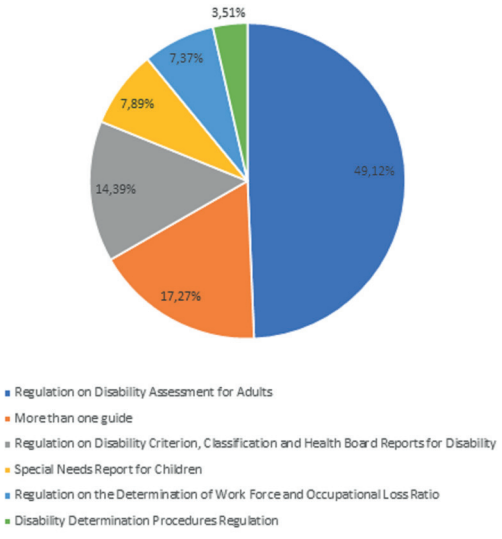

Figure 2. Used guides

DISCUSSION

Studies have shown that the most common cases are caused by traffic accidents and that more reports are made to adult males [3,8]. In our study, it was determined that more reports were issued for adult males, in line with the literature. We think that this data is due to male dominance in traffic. When gender statistics are examined by years, it is seen that the rate of female drivers increased from 19% to 26.8% between 2010-2020 [9]. We expect this data to be balanced between genders as the male density in vehicle traffic decreases.

In our study, it was found that the cases occurred at least in the winter season. It is expected that the number of traffic accidents will increase in winter due to climatic conditions and decreasing sunshine hours, but the number of intercity trips decreases and daylight hours decrease in winter [10]. The decrease in the number of intercity trips in winter and the precautions taken

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by drivers reduce the number of traffic accidents and therefore the number of disability reports written to people. While the number of cases increases in the summer months, the number of cases decreases in the winter months, which is in line with other studies [2,8].

In our study, it was determined that the articles of the current regulation, the Regulation on Disability Assessment for Adults, were mostly taken into consideration when preparing the report [3]. It has been understood that this data is compatible with other studies. We think that the reason for this situation is that the regulation that is most taken into consideration is the Regulation on Disability Assessment for Adults, which is in force, and there is a request from the relevant authorities in this direction. In our study, the fact that requests for more than one regulation came in second place with 17.27% shows that confusion still continues in the field of law and that the question of whether the date of the incident or the date of the case will be taken as basis when preparing the report cannot be answered.

In our study, it was observed that individuals between the ages of 1-18 most often survived accidents without fractures, and second most often, they survived with tibia or fibula fractures. In different studies, it was observed that individuals in childhood survived traffic accidents with or without a single fracture [11]. The data turned out to be compatible. The skeletal system in children is less mineralized, richer in vascular structure, more flexible (lower elastic modulus) and has a thicker periosteum compared to adults [12]. For this reason, it was observed that individuals between the ages of 1-18 suffered lower rates of musculoskeletal system malfunctions in accidents than older age groups. It was seen in literature reviews that individuals in the childhood age group were diagnosed with mental behavioral disorders at a higher rate than other age groups [2].

It is known that the incidence of osteoporosis and sarcopenia (loss of muscle mass) increases with age and reflexes slow down [13,14]. We think that the reason why traumatic fractures (vertebra, wrist and pelvis) are more common as age increases is osteoporosis, sarcopenia and slowing of reflexes.

In our study and other studies in the literature, it has been observed that traffic accidents and related disability reports increase in the summer months. Seasonal and geographical measures should be increased to prevent traffic accidents, which increase due to the increase in seasonal traffic mobility in the summer months.

Although extra precautions are taken for children in vehicles, ergonomic designs should also be planned for adult and elderly age groups, as musculoskeletal system traumas are more common in the elderly.

CONCLUSION

After the accident, psychiatric examination should be considered especially for children, and a long-term treatment plan should be implemented when necessary.

After the accident, health professionals who respond to the accident should classify the cases according to age groups in order not to miss any pathological conditions, and in terms of trauma localizations, extremities should be evaluated carefully for children, and vertebra and rib fractures for elderly individuals.

If an accident occurs despite the precautions and there are sequelae despite the interventions, it should be clearly stated which regulation provisions will be applied in the reports to be prepared in order to prevent loss of time and grievances that may arise.

Conflict of Interests
The authors declare that there is no conflict of interest in the study.

Financial Disclosure
The authors declare that they have received no financial support for the study.

Ethical Approval
This study was conducted with the permission of İnönü University scientific research and publication ethics board dated 12.12.2023 and numbered 2023/5370.

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