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Causes and circumstances of injuries in children

The problem of the incidence of traumas among children and youth is still topical. Some data show an increasing tendency in the last decades (2). Accidents and injuries are the most common reasons for death of children up to the age of 14. They often cause permanent disabilities. A large number of injuries can be avoided by applying proper prevention and educational activity. Therefore, it seems worth studying the causes and circumstances of injuries in children.

MATERIAL AND METHODS

A retrospective analysis of medical documentation concerned 768 patients (362 from the urban area and 406 from the rural region), aged 7-15, who were treated in Surgical Ward of Specialist Paediatric Hospital between 30th June 1997 and 30th June 1998.

RESULTS AND DISCUSSION

Results presented in percentage juxtapositions are demonstrated by means of charts and tables. Our studies showed that the biggest accident rate and the incidence of traumas were related to children from the age of 10 to 12. This group represented 46% of the studied population. The majority of patients in this group were boys (30%). The high accident rate is thought to be caused by an increase of physical activity in children 7-12

years old and is associated with variety of children's games and plays. Furthermore, it is known that the relationship between the age and risky decisions exist. For example, 11-12-year-old children, unaware of danger, are more likely to take a risk than 9-10-year olds who are more distrustful and cautious (8). It was also suggested that in children at the age of 11-12 a past accident was not a sad experience for the future (5). In our studies, injuries occurred more often among boys in all age groups. These data are consistent with observations presented by other authors (1). Boys are more lively and easily to take a risk than girls, therefore, they are particularly exposed to accidents and injuries. We observed that accidents and traumas happened more often in children from the rural area (53%). The incidence of traumas in children living in the rural environment is connected with both work and lack of parents' supervision. It is common that children take part in food production. However, they often do things alone which are not adequate for their ability (9). These data are in contrast with other studies showing more frequency of injuries in the urban area. It may be due to the rural specific region surrounding Kielce. It was reported that in the rural area fewer children got injured in winter months (6). Similarly, we observed that the least injuries happened in winter (17%) compared with the biggest number in summer (33%) (Tab. 1).

Tab.1. Frequency of injuries in different seasons of the year

Season and months	Number of children	Percentage of children (%)
Spring (III - V)	189	25 %
Summer (VI - VIII)	254	33 %
Autumn (IX - XI)	191	25 %
Winter (XII - II)	134	17 %
Total	768	100 %

Probably it is connected with insufficient supervision over children by parents in summer time. Moreover, children play a lot during summer, have plenty of free time compared to school terms, some of them have a part-time job or help adults with harvest and this is why they can be more often exposed to traumas. In the studied population dominant were accidents at home (56%). After home accidents, the second place fell to road accidents (18%) and next were accidents at school (13%), at farms (7%) and others (6%). On the one hand, home is a place where children feel safe with their parents. On the other hand, a house supplied with, for example, sharp-pointed or sharp-edged devices can create a danger for children. Parents should pay attention to such dangerous objects and teach their children how to avoid them. Childhood curiosity of outside world is a power of exploration of that world (4). The most frequent causes of children's injuries at home were falls including especially falls from height (70%) and burns (10%) (Tab. 2).

It is thought that falls play an important role as causes of both children's traumas and death. They are just as frequent in different age groups (7). In our studies, children were particularly injured on roads when were walking (49%) or cycling (24%). Some data

Tab.2. Causes and circumstances of injuries in children

Causes of injuries at home	Number of children	Percentage of children (%)
Falls	299	70
Burns	44	10
Others	38	9
Beatings	27	6
Animal bites	8	2
Foreign bodies	8	2
Accidents connected with current and explosives	5	1
Total	429	100
Causes of road injuries		
Hit by car	68	49
Accidents during cycling	33	24
Accidents when driving vehicles	32	23
Others	5	4
Total	138	100
Causes of injuries at school		
Falls	56	59
Accidents at physical training	22	23
Beatings	8	8
Others	7	7
Accidents at swimming-pool	3	3
Total	96	100

present a raising number of road accidents which concern children. Among casualties, pedestrians and cyclist are the most seriously injured (3). Therefore, children should be taught perceptiveness, proper and quick reactions and recognition of dangerous situations on roads (5). It is also necessary to build safe playgrounds and routes for cycling. Similarly, as with accidents at home, falls were the first causes of traumas at school (59%).

CONCLUSIONS

1. The biggest number of accidents concerned 10-12 year-old children, and boys were more frequently injured than girls.
2. Children got injured especially at home.
3. Most accidents occurred in summer.

REFERENCES

1. Dąbek M.: Psychologiczne mechanizmy podejmowania decyzji ryzykownych przez dzieci. Wrocław 1996.
2. Górnicki B., Dębiec B.: Pediatria. PZWL, Warszawa 1995.
3. Jakliński A. et al.: Medycyna sądowa. PZWL, Warszawa 1983.
4. Korsak A.: Chronić dziecko przed wypadkiem. CRZZ, Warszawa 1975
5. Kossakowski J.: Zarys zagadnień chirurgii wieku dziecięcego. PZWL, Warszawa 1965.
6. Krawczyk W. et al.: Analysis of causes and effects of children's injuries in a rural area. Ann. UMCS, sectio D, vol. 55, 2000.
7. Mazur E. et al.: Zapobieganie urazom u dzieci i młodzieży – propozycje programu. Nowa Medycyna, 14, 1996.
8. Studencki R.: Psychologiczne uwarunkowania urazowości wypadkowej dzieci i młodzieży. Psychologia Wychowawcza 2, 1994.
9. Woynarowska B.: Wypadki, zatrucia i urazy jako przyczyny zgonów i hospitalizacji dzieci i młodzieży w wieku 5–19 lat w latach 1960 - 1974. Zdrowie Publiczne, 4, 1978.

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SUMMARY

The problem of the incidence of traumas among children is still topical and statistical data confirm an increasing tendency in the last decades. The purpose of the work was to estimate the causes and circumstances of injuries in children at the age of 7 to 15, who were admitted to Surgical Ward of Specialist Paediatric Hospital in Kielce between 30th June 1997 and 30th June 1998. A retrospective analysis of medical documentation concerned 768 patients.

Our studies showed that the biggest number of injuries was related to children 10-12 years old (46%). The majority of patients were boys. Most injuries occurred in summer (33%). In the studied population dominant were accidents at home (56%) and then road accidents (18%), injuries at school (13%) and on farms (7%). Accidents and injuries occurred more often in children from the rural areas (53%).

Przyczyny i okoliczności urazów u dzieci

Problem urazowości wśród dzieci jest ciągle aktualny, a dane statystyczne potwierdzają tendencję wzrostową w ostatnich dziesięcioleciach. Celem pracy była ocena przyczyn i okoliczności urazów u dzieci w wieku od 7 do 15 lat, hospitalizowanych w Oddziale Chirurgicznym Wojewódzkiego Specjalistycznego Szpitala Dziecięcego w Kielcach w okresie od 30 VI 1997 do 30 VI 1998 roku. Retrospektywna analiza dokumentacji medycznej dotyczyła 768 pacjentów. Największa urazowość wystąpiła w grupie wiekowej 10–12 lat (46%). Zdecydowaną większość leczonych stanowili chłopcy. Najwięcej urazów nastąpiło w okresie letnim (33%). W badanej populacji dominowały wypadki w domu (56%). Na drugim miejscu były wypadki drogowe (18%), a następnie urazy doznane w szkole (13%) i w gospodarstwie rolnym (7%). Urazy i wypadki przeważały wśród dzieci mieszkających na wsi (53%).