

Death in childhood and adolescence: Accident!

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ABSTRACT

In childhood and adolescence periods, individuals encounter many dangerous situations caused by not completing their biological and psychological development. Some of them are pathological deaths such as accidents, poisoning, and traumatic actions for children. Awareness of the number and causes of death is an indicator that reflects the health status of our society. It is also vital in-service planning for both preventive and therapeutic medical professions. The purpose of this article is to evaluate death cases between the ages of 0–18 in terms of forensic medicine. As a result, it has been understood that accidents are an important cause of death in childhood. In particular, developing policies to protect against common accidents will reduce the mortality rates of children.

Keywords: Autopsy, childhood, family medicine, forensic medicine

Introduction

Individuals in childhood and adolescence face many dangers as they cannot complete their biological and psychological development. The pathological deaths, accidents, poisoning, and traumatic situations could be given as default dangers. Although there are many definitions, childhood can usually be explained as a period between the ages of 0–18.^[1,2] Child mortality is inversely proportional to the development levels of countries.^[3–5] Infant mortality rates have been decreasing globally in recent years and are expected to continue this trend globally in the near future. Global infant mortality rate was calculated as 63/1000 between 1990 and 1995. However, this ratio is estimated to be 23/1000 between 2025 and 2030.^[6]

The main reason for performing a post-mortem medical examination in children is to determine the cause of death. In

this way it is possible to determine whether children are abused.^[7] In addition, accurate and reliable information about the cause of death can be obtained by performing an autopsy. These data have also vital importance in terms of the public health planning. Male/female ratio was reported as 11:7 in a study conducted by He *et al.*^[8] In a different study conducted by Suominen *et al.* the average age of 11.347 cases were calculated as 8.6 years, and 65.4% of these cases were reported to be male.^[9] Accidental injuries are an important cause of death and illness, especially for children and adolescents.^[10–12] Traffic accidents are the most common type of accident that causes injury or death, and is the second most common cause of death in children aged 10–14 years.^[11] In Pakistan, Mirza *et al.* reported that individuals in childhood are involved in 18.8% of all traffic accidents.^[13] Similarly, He *et al.* also reported that 278 of 491 children's cases died from accidents.^[8] Yağmur *et al.* also concluded that 33.3% of head trauma deaths were caused by traffic accidents.^[14] The importance of developing new strategies and providing training to lower this high rate is widely accepted. As a result, relevant trainings have started to be provided in schools and similar security centers.^[15,16] However, the training provided does not seem sufficient to reduce these rates. However, the education provided does not seem sufficient to decrease these rates. Even in developed countries like Germany, the spread of traffic accidents

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Received: 26-03-2020

Revised: 25-04-2020

Accepted: 13-06-2020

Published: 25-08-2020

Access this article online

Quick Response Code:



Website:
www.jfmipc.com

DOI:
10.4103/jfmipc.jfmipc_465_20

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How to cite this article: Keten A. Death in childhood and adolescence: Accident! J Family Med Prim Care 2020;9:3807-9.

is another evidence of inadequate education. In the event of a traffic accident, the children in the vehicle were reported to be in very high danger. The reasons for being in a dangerous situation are the absence of a seat belt for the child, the speed of the vehicle and the inability to control whether the driver is drinking alcohol.^[17-19] Children over 1 year who are not under family supervision are at great risk for out of vehicle traffic accidents, as they cannot predict potential hazards.^[20] In similar studies conducted in our country and in the USA reported that drowning in water is one of the most common accident types in childhood deaths.^[15,19,21]

The frequency of sudden cardiac death in young people is between 0.7 and 3.7 per 100,000 people. It is very difficult to identify the causes of sudden cardiac deaths.^[22-24] Almost half of the sudden death cases cannot be explained even after autopsy.^[25] Infection-related deaths have an important place in childhood deaths. The main causes of pathological deaths between the ages of 1–4 are infection and related complications and heart anomalies.^[2,9,26] Although suicide is relatively rare in childhood, it is a serious cause of death. However, it is more common in adolescence. The tendency of suicide rate increases in South America while decreases in Europe.^[27-29]

Child Injuries and Family Doctors

Family education, development of preventive measures, and close monitoring of children are important in preventing child accidents. These follow-ups may be in the form of both knowledge determination and psychological evaluation together with the training of families during and after pregnancy.^[30] It is important for every family physician to have a basic level of knowledge in the differentiation of accident and child abuse in order to handle these cases correctly. In some countries, children are followed up by family physicians for their development after birth. It should be noted whether or not the injuries recur in accidental injuries of children, especially those who are followed by family physicians who examine the patient more frequently and in recurrent periods. The presence of recurrent traumas in children should be considered as abuse and it should be taken into consideration that this situation will become more dangerous gradually. Every physician is obliged to report the abuse he/she has noticed. When such a situation is noticed, more sensitive examinations should be made, and if necessary, work with relevant social institutions to prevent this situation from recurring. Making these notifications accurate and timely will make it easier to take precautions and reduce the frequency of deaths due to preventable accidents. Especially considering swimming pool deaths are preventable deaths, this issue should be considered in the health assessment of families and children.^[31,32]

Child deaths due to traffic accidents, which are among the preventable deaths, also have an important place. This issue should always be considered in the provision of preventive health services.^[33] Parents who have or want to have children should be informed about the use of a baby seat, seat belts, and speed

control during their follow-up. When necessary, families should be directed to professional help.

In addition, autopsy is important to access actual epidemiological data in accidental deaths and then take protective measures in the light of these data. Therefore, it is important to report suspicious situations and perform an autopsy when necessary.

Conclusions

Accidents are known to be the major cause of childhood deaths. Although the socio-economic level of some country is high and child mortality rates are low, child mortality rate due to accidents is still high. In order to reduce this ratio, it is important to develop preventive policies and to provide relevant trainings. The sensitivity of family physicians, who follow the families and children, is important in making these trainings and evaluations.

Ethical approval

This article does not contain any studies with human participants or animals performed by any of the authors.

Financial support and sponsorship

Nil.

Conflicts of interest

There are no conflicts of interest.

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