

The Parents' Attitude for Caustic Ingestions : Still the Most Important Factor for Prevention?

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Caustic esophageal burns may cause many somatic, mental, and social problems. One of the major sequels is the loss of one's own esophagus. Taking a start from the concept that "for such accidents, the best is to prevent children from contacting the corrosive substances", we made an epidemiological survey. In the first section, we analyzed the parents' attitudes for caustic ingestion, questioning whether they have some precautions at home or not, their level of awareness on caustics. In the second section, we detailed the first-aid at home. Thirdly, we questioned parents' awareness about the law. In the first part, we found that the parents, in general, were aware of drugs trying to prevent their children by keeping the drugs etc. In the second part, we found that almost 70% of parents' choices for the final approach in first aid at home was to visit a doctor's office or a health facility. We did not observe such satisfactory results when we questioned the law aspect of such accidents. Almost 50% of the parents agreed on their responsibility of guilt but most of them did not know the rule of Turkish law about such ingestion or accidents. This study stresses out that, when individually evaluated, the parents' attitudes for caustics etc. are not generally in the wrong direction, but still there is much to do to inform the parents especially the ones who have given the wrong answers both on the medical aspects and the rules of the law. It is worth to spend a multicenter and multinational effort on the preventive aspect of this problem to document the differences of the communities and what is more important for every community in the study, what are the common denominators and what can be done for prevention and if possible, eradication of such a problem by people involved in treating such patients. [Journal of Turgut Özal Medical Center 1996;3(4):315-318]

Key Words: Corrosive materials, childhood injury, esophageal injury

Ebeveynlerin korosif madde alımı konusundaki yaklaşımları bu kazalardan korunmada hala en önemli faktör mü?

Korozif ösofagus yanıkları çocukluk çağında birçok somatik, ruhsal ve sosyal problemler yaratabilir. Majör komplikasyonlardan birisi de eğer işler kötü giderse çocuğun ösofagusunu kaybetmesidir. Bu gibi kazalarda en iyi yöntem korunmaktır prensibinden hareketle anket şeklinde bir epidemiyolojik araştırma düzenledik. Birinci bölümde ebeveynlerin davranışlarını analiz ettik. İkinci bölümde ilk yardım konusundaki yaklaşımları değerlendirdik. Üçüncü bölümde ise kanunlara karşı duyarlılığı ölçtük. Bulgularımız ebeveynlerin çocuklarını ilaçlar vs. konusunda korumaya çalıştıklarını gösterdi. Ayrıca %70 gibi bir oranda ilk müdahalenin yapılması için ya bir doktor muayenehanesi ya da bir sağlık kuruluşu arayışını tespit ettik. Ancak kanunların bilinmesi çok az bir oranda idi ve ebeveynlerin ancak %50'si bu gibi kazalarda kendilerini suçlu görmekteydiler. Birey olarak ebeveynler yanlış davranışlara pek rağbet etmemektedirler ancak, alınan sonuçlar hem eğitimin hem de çok merkezli olarak araştırmaların yapılmasının mutlaka gerekli olduğunu göstermektedirler. [Turgut Özal Tıp Merkezi Dergisi 1996;3(4):315-318]

Anahtar Kelimeler: Korozif maddeler, çocukluk kazaları, ösofagus yanıkları.

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INTRODUCTION

Ingestion of foreign substances often involve nonpharmaceutical agents especially household products. Most of them end up with asymptomatic or mildly symptomatic cases but some of them cause severe esophageal injury. In an annual report of American Association of Poison Control Centers, poisoning in children under 6 years old consisted 62% of all reported poisonings and was usually accidental (1).

Once they occur, caustic esophageal burns may cause many somatic, mental and social problems in children and their parents. Every treatment has its own complications and risks as well as its benefits. One of the major sequels is the loss of one's own esophagus that may be really debilitating if the organ replacement procedure goes wrong (2,3).

Taking a start from the concept that "For such accidents, the best is to prevent children from contacting the corrosive substances", we made an epidemiological survey.

MATERIAL AND METHODS

A questionnaire consisting of 44 questions was prepared by a collaborative work of departments of Pediatric Surgery and Public Health in İnönü University Medical Faculty. The aim of the first section in the questionnaire was to analyze parents' attitudes for caustic ingestion, questioning whether they have some precautions at home or not, their level of awareness on caustics. In the second section, our aim was to detail the first-aid at home. Parents' awareness about the law was our aim to analyze in the third section.

FOREIGN MATERIAL INGESTION IN PEDIATRIC AGE QUESTIONNAIRE

#..... 2. Full name:..... 3. Age:.....4. Address:.....
 Level of education: 1: Illiterate 2: Literate 3: Primary school 4: Secondary school 5: High school
 6: University or higher degree
 Family type: 1: Basic family 2: Other (describe).....
 Mother's occupation:.....
 Who gives the decision on what to do when the children have a disease in the family? (Will be asked to basic families)
 1: Primarily I 2: My spouse 3: Both of us
 Who gives the decision on what to do when the children have a disease in the family? (Will be asked to wide families)
 1: Primarily I 2: My spouse 3:Both of us 4: Mother in law 5: Father in law
 Heating system in the house:.....
 Is there a cupboard for household cleaners in the house? 1: Yes 2: No
 Is this cupboard out of reach of children? 1: Yes 2: No
 Is there a cupboard for medical and/or chemical materials? 1: Yes 2: No
 Is this cupboard out of reach of children? 1: Yes 2: No
 Do you use insecticides, rodenticides, veterinary medicine or agricultural chemicals? 1: Yes 2: No
 If yes, please indicate the name/names:.....
 If you are using insecticides, rodenticides, veterinary medicine or agricultural chemicals, is there a cupboard in the house?
 1: Yes 2: No
 Is this cupboard out of reach of children? 1: Yes 2: No
 Number of living children :.....
 Ages of children:.....
 Number of children under 15:.....
 Has any of your children under 12 ingested foreign material in the last 3 years? 1: Yes 2: No
 If the answer is 'No', please skip to question no. 34
 If yes, when did this happen? :.....days/weeks/months/years ago
 What kind of a foreign material was ingested? Please give a short description of the event.....
 1: Agricultural chemical 2: Rodenticide 3: Human medicine 4: Veterinary medicine 5: Bleach
 6: Caustic soda 7: Insecticide 8: Other cleaners 9: Diesel fuel, gasoline, etc.
 10:Other (Please indicate).....
 Age of the child at the time of event:.....
 Sex of the child 1:M 2:F
 Did the child had any physical or mental disorder at the time of event? 1: Yes 2: No
 Was there a companion in the house at the time of event? 1: Yes 2: No
 How long was the time gap between the foreign material ingestion and the first therapeutic approach?.....mins/hrs/days

What kind of therapeutical measures were taken after the event?

- 1: Nothing done 2: Home therapy by us (Please define).....
 3: Transferred to a primary health care unit
 4: Transferred to a primary health care unit, then to ahospital
 5: Transferred tohospital, and treated as an outpatient
 6: Transferred to.....hospital, and hospitalized

Were you inquested by the police after the event? 1: Yes 2: No

If yes, have you been subject to legal proceedings? 1: Yes 2: No

How did the foreign material ingestion result?

- 1: Death 2: No sequel regarding health occurred
 3: Esophageal burn, still under therapy occurred
 4: Other: (Please define).....

Do you think a substance which can lead to an esophageal burn without causing intoxication exists? 1: Yes 2: No

If yes, please write the name/names:.....

Do you know, or have you ever heard of someone who has an esophageal burn? 1: Yes 2: No

AFTER INFORMING THE SUBJECT ABOUT CORROSIVE SUBSTANCE INGESTION

What do you think must be done to a child who ingested a substance known to cause esophageal burn?.....

Do you think that the substances below would cause esophageal burn injuries or not?

(Choose the ones you think that would cause injury)

- 1: Caustic soda 2: Bleach 3: HCL 4: Liquid detergent 5: Alcohol 6: Gasoline
 7: Ingesting a very hot substance

Do you read the precautions written on the drugs or house cleaners before you use them? 1: Yes 2: No

What do you expect to be written as precautions on the drug or house cleaner boxes?

How do you buy house cleaners? 1: In sealed boxes 2: Without sealed boxes

Do you think that someone is legally responsible if your child ingests a foreign material? 1: Yes 2: No

43. If yes, who do you think is/are legally responsible?

- 1: School teacher 2: The child him/herself
 3: Shopkeeper 4: Parents 5:.....together

What do you think would be the penal provision for an offense like ingesting a foreign material in the Penal code?

- 1: No penal provision 2: To be fined 3: Child sent to a reformatory
 4: Parents receive up to a 14 year prison sentence 5: Don't have an idea

657 families were visited at their homes and the acquired data in questionnaires were used as the mainframe of our database.

Kolmogorow-Smirnow chi-Square test was used to analyse the statistical significance of the results.

RESULTS

Demographic data: mean age of the participant mothers was 31 ± 7.5 , 96.5% of participants were house-wives, 83% of the participant families consist of only parents and children. The school they lately graduated was primary school in 50% of participants.

Storage pattern was well managed in 60% of the group for household products, and in 70% for drugs or insecticides. 85% said that they were attempting to read the cover of the household product. For the questioning of any occurrence they heard of

“esophageal burn” in the community that they live, 12 participant's answers were positive.

For the questioning of what they will do if they suspect of a burn in their child's esophagus, 50% of participants' answer was to directly take their child to a doctor or a hospital. Another 20% would try liquids and emetics and finally a doctor. The last 30% of participants' choice was only emetics or liquids or both.

When asked “if death happens because of esophageal injury, is there anyone guilty, 67% thought there was someone guilty. In the group that say guilt was there, when asked who was guilty, 92% thought of parents.

When asked what the penalty in Turkish law would be, 55% told no penalty would be charged, the correct answer for imprisonment up to 14 years was only the choice of 16% of the participants.

The parents's level of education did not have any statistically significant effect on the preventive

measures or the home first-aid management when we applied Kolmogorow-Smirnow Chi-Square test

DISCUSSION

In the first section, data has revealed that the parents, in general, were aware of drugs, trying to prevent their children by keeping the drugs, cleaning materials etc. in closed environments. In the second section, we found that almost 70% of parents' choices for the final approach in first aid at home was to visit a doctor's office or a health facility. We did not observe such satisfactory results when we questioned the law aspect of such accidents. Almost 50% of the parents agreed on their responsibility of guilt but most of them did not know the rule of Turkish law about such ingestion or accidents.

Other than the periodic reports of some organizations for poisoning, we were not able to find any study or data on such preventive medical aspect in review of the recent literature, in other words, the epidemic potential of a community for such events to occur. We were not able to find any discussion of the topic in textbooks of public health either.

This kind of study may help extremely on identifying the level of importance of education and social status of the communities when performed simultaneously in a multinational basis or in different regions of the same country. There is a major controversy on especially the importance of education. One side of the controversy consists of a concept that education has no importance, it is easily forgotten leaving no trace behind after a period of time and this kind of ingestion is an accident which is certainly impossible to eradicate and prevent totally. The other side of the controversy discusses that this is a totally

preventable problem which has social and educational aspects and can be eradicated (3).

CONCLUSION

This study stresses out that, in our region, when individually evaluated, the parents' attitudes for caustics etc. are not generally in the wrong direction, but still there is much to do to inform the parents especially the ones who have given the wrong answers both on the medical aspects and the rules of the law.

It is worth to spend a multicenter and multinational effort on the preventive aspect of this problem to document the differences of the communities and what is more important for every community in the study, what are the common denominators and what can be done for prevention and if possible, eradication of such a problem by people involved in treating such patients.

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