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RESEARCH ARTICLE

PHARMACEUTICAL POISONINGS AMONG CHILDREN IN REPUBLIC OF MOLDOVA.

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Abstract

The frequency of pharmaceutical-related poisoning in the Republic of Moldova during 2012-2015 was assessed. Age characteristics of poisonings, ways of exposure to chemicals and recommendations of preventive measures were discussed. The monitoring of acute pharmaceutical and chemical poisonings is one of the weak links of the recordkeeping in the public health system in Moldova. This article demonstrates the increasing number of poisonings in 2015 after developing of the Order No. 906 of 30.11.2014 on the Notification of and Research into the Acute Exogenous Non-Occupational Chemical Poisoning Cases and reflects the real situation of chemical poisoning in the country.

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Introduction:-

In the past years, there have been an increasing number of cases of lethal chemical poisoning both in adults and children, which occurred accidentally and for purpose of suicide. The occurrence of chemical poisonings is increasing every year (Lam, 2003; Ahmed et al, 2015; Wilkerson et al, 2005; Shams et al., 2015). Toxic exposure to pharmaceutical product and chemicals is among the most common reasons for emergency department visits and hospital admission in many countries (Tejas et al., 2013; Akhtar et al., 2006; Abahussain et al., 2007; Eman A. Abahussain et al., 2010). On a global level, there are several million acute poisonings yearly, caused by the accidental or suicidal use of chemicals (i.e. medicines substances, drugs, alcohol, pesticides, etc.). Acute chemical poisoning is an actual health problem for the Republic of Moldova. The monitoring of acute pharmaceutical and chemical poisonings is one of the weak links of the recordkeeping in the public health system in Republic of Moldova. This had a negative impact on the quality of reporting, the treatment and rehabilitation of the children poisoned with xenobiotics. For the purpose of improvement this situation have been developed Circular No. 01-3/1282 of 22.05.2014 “On the Gaps in the Registration and Reporting of Acute Exogenous Non-Occupational Chemical Poisoning Cases” and circular No. 01-3/569 of 17.03.2015 “On the Work of Healthcare Facilities In Terms of Acute Exogenous Non-Occupational Chemical Poisonings in 2014 and the Tasks for 2015” and “On the Work of Healthcare Facilities in Terms of Acute Exogenous Non-Occupational Chemical Poisonings in 2015 and the Tasks for 2016” as well as the Order No. 906 of 30.11.2014 on the Notification of and Research into the Acute Exogenous Non-Occupational Chemical Poisoning Cases.

The purpose of present communication is to assess the case frequency concerning acute pharmaceutical and chemical children poisoning recorded in Republic of Moldova after developing the Order No. 906 of 30.11.2015 on the Notification of and Research into the Acute Exogenous Non-Occupational Chemical Poisoning Cases and to make recommendations of preventive measures.

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Distribution of poisonings among children according to the types of chemical poisoning is presented in table. Pharmaceutical products were the most frequently ingested agents for children 1-3 years old and 3-18 years old. The medicinal substances such as antidepressant and benzodiazepines, analgesics, anti-inflammatory medications were identified as common agents involved in children poisoning. During 2012-2015 in both studied groups of children were registered 2301 cases of poisonings. In 2015 the number of pharmaceutical poisonings cases had approximately doubled in comparison with 2012. All cases were strictly recorded according to Order No. 906. Category of alcohol remains as the most of ingested agent among children 3-18 years old. Underage drinking among the teenagers is a serious public health problem. Alcohol is the most widely used substance of abuse among youth, and drinking by young people poses enormous health and safety risks. During 2012-2015 among children 3-18 years old were registered 634 poisoning cases with one death in 2015. This year also twice more cases of poisonings have been registered in both studied age group of children.

Table:- Distribution of chemical poisoning among children according to the types of chemical poisoning.

Source of chemical poisoning	**Age group**	**Years**				**TOTAL**
		2012	**2013**	**2014**	**2015**	
Pharmaceutical products	1-3 years old	174/1*	160/0	283/0	380/0	**997/1**
	3-18 years old	280/1	304/2	298/0	422/0	**1304/3**
Alcohol	1-3 years old	14/0	9/0	24/0	24/0	**71/0**
	3-18 years old	118/0	146/0	126/0	244/1	**634/1**
	TOTAL	**586/2**	**619/2**	**731/0**	**1070/1**	**3006/5**

*- cases of poisoning death

The presented poisoning cases indicate that children are group of high risk for poisonings. On the basis of this data, may suggest that it is advisable for parents to be aware about toxic properties of medicinal substances, alcohol, drugs due to their higher number of poisoning incidences among children.

The most frequent way by which pharmaceutical and chemical products associated with the acute poisonings enter into the human organism is ingestion.

Conclusion:-

Development of the Order No. 906 has improved the system of registration of cases of poisoning. The increase in the number of poisonings in 2015 might be explained by the fact that all cases were strictly recorded (according to Order No. 906), and this has allowed to show the real situation of chemical poisoning in the country.

Recommendations of preventive measures:-

Keeping pharmaceutical products away from children, in special medical kits, packed and labeled. The best way to reduce the number and severity of children chemical poison exposure is through public awareness and information campaigns.

Reducing the attractiveness of chemical product's packing. Careful attention in terms of the usage and the storage of medicines should also be given to minimizing the risk of poisoning among children.

Parental education and intensified child supervision are the indicated measures of prevention for unintentional poisoning.

References:-

1. Tejas Prajapati, Kartik Prajapati, Rakesh Tandon, Saumil Merchant Acute Chemical and Pharmaceutical Poisoning Cases Treated in Civil Hospital, Ahmedabad: One year study. Asia Pacific Journal of Medical Toxicology, 2013; 2(2):63-6.
2. Wilkerson R, Northington L, Fisher W Ingestion of toxic substances by infants and children: what we don't know can hurt. Crit Care Nurse. 2005; 25(4): 35-44. 1. Akhtar S, Raj RG, A-Anezi F. Risk factors in acute poisoning in children - A retrospective study. Kuwait Med J., 2006; 38:33–36.
3. Abahussain EA, Ball DE. Disposal of unwanted medicines from households in Kuwait. Pharm World Sci.; 2007; 29:368–373
4. Ahmed A, AlJamal AN, Mohamed Ibrahim MI, Salameh K, AlYafei K, et al. Poisoning emergency visits among children: a 3-year retrospective study in Qatar. BMC Pediatr. 2015;15:104.
5. Eman A. Abahussain and Douglas E. Ball. Pharmaceutical and chemical pediatric poisoning in Kuwait: a retrospective survey. Pharm Pract (Granada). 2010; 8(1): 43–49.
6. Lam LT Childhood and adolescence poisoning in NSW, Australia: an analysis of age, sex, geographic, and poison types. Inj Prev. 2003; 9(4): 338-342.
7. Shams Vahdati S, Rajaei Ghafouri R, Dalil S, Baghizadeh S, Ostadi A, et al. Alcohol Poisoning in Toxicology Center of East Azarbaijan Province of Iran. Eurasian Journal of Emergency Medicine, 2015: 131-133.