

Children Exposure to Toxic Environment in a Third World Country, Pakistan

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ABSTRACT:

The objective of this presentation is to make the people as well as the government aware of the major issue of the exposure of children to toxic environments. Children are the backbone of any nation; the survival of a nation depends on their health. It is very important to look in to the matter seriously and this conference will be the platform not only to discuss the issue and share the experiences but also to globally divert the attention of the concerned authorities in the region.

According to the available data of National Poison Control Center, Karachi, Pakistan 233 Children from 1999 to 2002 were admitted due to their exposure to different toxic substances & animal toxins. The causative agents that caused toxicity in those children were chemicals, plants, and animal bites. Another group of children admitted with suspicion of unknown poisoning were the great problem as the available laboratory facilities were not sufficient to detect every toxic substance or its metabolite. In this situation the treatment was symptomatic and according to the clinical status of the child. The chemicals involved were organophosphates, corrosives, rodenticides, kerosene oil, medicines and heavy metals.

Other than the cases admitted in NPCC, a screening study was conducted by NPCC in the cotton growing area, Nawakot, a suburb of Multan city in Pakistan. The study was based on the history, clinical examination, and the assessment of serum cholinesterase levels. The study included 225 volunteers including 34 children. Out of these 34 children 6 were found to be affected by toxicity of organophosphate compounds.

Another incidence took place recently in the outskirts of Multan when 6 schoolgirls died after drinking water from a well in their school. The soil water was contaminated with arsenic, which was confirmed later on. The second eye opener came to existence when the milk van of a renowned confectionary in Multan was stopped on the road for checking by the custom & excise department. Unexpectedly, it was found that the milk was carried in the used empty containers of pesticides.

The biggest environmental disaster happened at Clifton beach, Karachi when more than 27000 tons of crude oil were spilt when the vessel Tasman Spirit ran aground. This wreckage contaminated the whole coastal area that also includes residential areas. It was observed that children with their bare hands and feet were playing in the black oily water and at the same time were collecting this black gold in their house hold containers, which was then heated to evaporate the water, leaving the oil behind. Being a technical member of the health team constituted by the ministry of health and WHO, I got an opportunity to observe that the children exposed to the oil were suffered from acute toxicity, which lead to skin rashes, dermatitis, conjunctivitis etc. They all were treated symptomatically. The blood samples were also taken and few of them showed neutropenia, thrombocytopenia and eosinophilia. As we don't have the previous record of children illnesses we cannot say that it is due to the crude oil exposure. Secondly there was no follow up, we do not know whether the observed clinical effects diminished, persisted, or became worse. Crude oil has many constituents like benzene, xylene and TPH, which according to IARC and EPA's classification are labeled as both carcinogenic and teratogenic, hence, long-term studies should have been carried out. This incidence affects the marine life badly, and as a result, thousands of fishes died and were washed ashore. It was observed that none of the fishes had eyes in their sockets as they were sucked inside. These dead fishes were, unfortunately, picked up overnight by some poultry feed makers. Ultimately we the humans ate the chickens fed on that feed.

The other aspect of this environmental disaster was that the oil soaked the beach completely, resulting in the seepage of oil in to the deep soil that ultimately contaminated the underground water table. Soil water is still the source of drinking water in many areas and is utilized without any filtration or chemical processing. The beach cleaning process took more than two months, which deteriorated the situation further, by increasing the duration of exposure.

In all these illegal and inhumane activities who is going to suffer the most? **The children.** We have to implement and impose special measures with utmost force and consistency that can minimize the environmental pollution to save our present and future generations.