SOME THOUGHTS ON POISONING

By JOHN COX '69

Poisoning fatalities occur each year in alarming numbers among our most precious citizens; children, who for the most part are pre-schoolers. The causative agents of poisoning in this age group largely depend on where the child lives. Rural children are prone to arsenic, lead, stove oil and phosphate poisoning. Most of the afore mentioned compounds, with the exception of stove oil, are found in insecticides and are often carelessly stored in the barn or shed. Children in the urban areas are prone to barbiturates, cleaning agents and ASA, to list only a few. Acetylsalicylic acid seems to be the drug of choice in most instances, almost to the extent of three in every five cases of poison ingestion. Although ASA is a relatively mild drug, a few grams, say 10 - 15, is sufficient to produce untoward reactions in a young child.

In the past decade a large number of Poison Control Centres have been established in the North American continent. These units are intended to function as information and treatment centres for large urban and rural areas. Such is the case with the Poison Control Centre in the Children's Hospital of Halifax. However, if a patient is unable to be transported to the hospital for any one of a number of reasons, the Centre will outline a course of treatment to the attending physician. A large percentage of the treatment consists of gastric lavage with a close watch afterward for signs of untoward reactions due to possible absorption of the ingested material. This is followed by a general lecture to the parents on proper storage of poisons.

In the more extreme cases of poison ingestion—especially drugs containing heavy metals and insecticides, a more elaborate procedure is taken. This generally involves gastric lavage followed by the administration of an antidote, such as BAL (British Antilewisite) or "loaded" EDTA.

The success of the Poison Control Centres has been evident by a reduction in the number of poisoning fatalities which occurred in the past. This reduction is due in part to the specialized treatment of patients and to an extensive public education program in prevention of poisoning in the home.

For the Physician's home, the drug companies have provided their contribution by eliminating their extensive sample advertising program. Reducing the incidence of poisoning among physician's children was probably not the reason for this step. However, the drug companies have made conscious and important strides in the field of antidote preparations.

The storage of drugs seems to be the problem in the home where small children are concerned. Even a toddler can struggle his or her way into the bathroom medicine chest to delight, for a short time, in the candy flavoured tablets. In most cases a severe scolding to stay away from the medicine chest for many children is an open invitation to visit when the parents are out or otherwise indisposed. Children have an innate curiousity for the unknown and a predilection for sweets, thus they seem to find their way to the candy flavoured pediatric preparations, especially ASA.

Acetysalicylic acid is so frequently encountered in childhood poisoning that it is worth discussing separately. Salicylate intoxication may be mild or serious. In the mild form it resembles alcohol intoxication but with a marked absence of euphoria. As a matter of fact, according to Goodman and Gillman, the patient is "melancholy". Some texts describe salicylate poisoning as resembling that of cinchonism, the symptoms seen following a large dose of quinine. This is characterized by ringing in the ears, dizziness, headaches, and mental confusion. (It seems odd but these are the symptoms which usually warrant the ingestion of one or two ASA tablets)

Serious salicylate poisoning results in hyperpnea, gastro-intestinal upset, disturbances in the acid-base balance and submucosal and subdermal hemorrage.

The disturbances in the acid-base balance are complex and to complicate the picture further; in protracted salicylate poisoning metabolic acidosis may occur. To a certain extent, the mechanism of metabolic acidosis is not understood but it is

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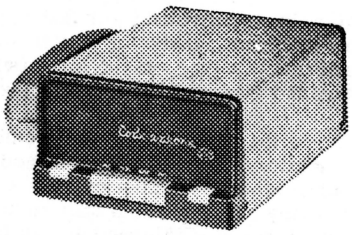

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significant that the salicylate has an effect on carbohydrate metabolism. Because of the complexity of acute salicylate poisoning, most authorities advise immediate hospitalization. In the hospital, the correction of acid-base balance can be carried out under close laboratory surveillance.

Petechial hemorrage in protracted salicylate poisoning is probably due to the ability of these compounds to supress prothrombin formation, similar to coumarin compounds.

It is interesting to note, that in the records of ASA poisoning, the offending compound in better than half the cases, was Children's flavoured ASA. This probably indicates a serious lack of security, on the part of the parents, in storage, or it would indicate that the child formed an attitude of possession because of the label. In either case or any case, for that matter, drugs which are left in visible places are potentially hazardous where small children are concerned. For most children, having their stomachs pumped once is enough to deter further ingestion of poisons. However, there are a few who have made several trips to have their stomach evacuated. For this group of children, it would be advisable for the parents to hire a toxicologist. For others, prevention is the best method of insuring a reasonable longevity.

WE ARE THE HOLLOW MEN.

By H.B. ATLEE

One of the things that troubles me increasingly is the cultural ignorance of medical students, internes and residents. They seem to have read so little in the three great background fields on which our literature is based, Greek history and mythology, the Bible and Shakespeare. Not so many years ago I was waiting in the operating room to get started with an operation. Everything was ready — even the sutures to sew up the skin wound had been cut and threaded. But there was no iodine to paint the skin. This peculiar phenomenon had been happening to me for over 40 years so I burst out at the nurses with: "I wish you foolish virgins could start pouring the iodine before the patient is ready to be cut." It was obvious from the startled look on their faces that they did not know what I was referring to, and suspected that my statement was in some way an aspersion against their virginity. So I turned to the interne and said: "Isn't it a peculiar thing that girls could get through High School without ever having heard of the foolish virgins?" He hesitated a moment and then asked: "What is it with the foolish virgins?"

As a result of many such instances as the above I have gained the impression that we are turning out highly trained medical technicians who are otherwise cultural ignoramuses, men highly competent in dealing with human sickness but seriously unprepared to deal with human problems. We are as a profession, in the words of T. S. Eliot, "the hollow men". On the surface we shine, but inside there isn't even pith (and sound that diphthong properly!) Of course, there is a very real excuse for this. The demands of medical education itself are so great on the student's reading time (and getting greater) that he has neither the opportunity, the inclination nor the energy to read anything outside the required. As a result, for the entire five years of his medical course - and at least another four if he specializes - he is completely out of touch with the culture of the world around him. In the vital fields of history, philosophy and literature his mind has stood still for from five to nine years. But a mind does not stand still - it either strides forward or slides backward. So, it slides backward.

How serious is this loss to the medical student? No matter into what community he goes eventually to practice medicine, he will be regarded by the public with a considerable amount of respect because of what he can accomplish as a doctor. The danger is that this same respect will be paid to every opinion he voices in fields outside medicine. But since the latter are based on what he picked up in High School and the three reluctant years he spent in premedicine, these opinions are neither very mature nor very reliable. In the field of non-medical ideas he will therefore be a one-eyed man kinging it over the blind.