

Tropic of Liverpool

Founded 75 years ago, the Liverpool School of Tropical Medicine was the first school of its kind in the world. It served then largely to train British doctors for work in the tropical parts of the British Empire. Now, no less necessary, it helps to train doctors from independent countries in the tropics, whence most of its students come. Since many tropical diseases are as prevalent today as in former times—and schistosomiasis, to name one, is actually more prevalent—a school where the highest standards of teaching and research prevail is certain to be needed into the foreseeable future.

Founded with the financial help of a local shipowner, Sir Alfred Jones, in November 1898, it was opened in April 1899 with, as its lecturer in tropical diseases, Ronald Ross. The appointment committee reached their decision only after much anxious thought, and the dean had to make a long statement about Ross's qualification for the post to the management committee, thereby rehearsing the work that was to win Ross the Nobel prize in 1902.¹ Now with six departments and a staff of some 200, the school continues to maintain the closest links with tropical countries by seconding to them experts to carry out local investigations or for teaching projects as well as receiving a constant stream of visitors and students from them. The school has put a girdle of scholarship round about the earth and is assured of gratitude from the peoples it has benefited.

¹ Maegraith, B. G., *Medical History*, 1972, 16, 354.

First-aid for Poisoning

In 1971 the number of people who died from poisoning in England and Wales was 3,064,¹ and some 70,000 adults who have deliberately poisoned themselves are treated in hospital each year. In most areas self-poisoning is now either the commonest or the second commonest cause of emergency admission to hospital.² In childhood accidental poisoning is also common, though in general the compounds used differ from the barbiturates, tranquilizers, and antidepressants taken by older people.³ This phenomenon is not limited to Britain, for in the United States about 500,000 cases of poisoning are said to occur each year.⁵

It is against this background that the emergency treatment of poisoning should be considered. The cardinal therapeutic principles are to reduce absorption of poison, to provide all necessary supportive measures, to hasten detoxication and elimination of the poison absorbed, and, on the rare occasion when such a substance exists, to administer a pharmacological antidote. The common practice in appropriately equipped hospitals of admitting severely poisoned patients to intensive therapy units has been the main factor in reducing hospital mortality from poisoning. Thus much effort has recently been spent on establishing and improving hospital techniques of resuscitation.⁶

But even the best-equipped hospital has no control over the length of time a patient takes to arrive after ingesting the poison. It would be expected therefore that further lives could be saved by paying closer attention to first-aid methods designed to limit the absorption of drugs and poisons in the all-important first hour or so after ingestion.

What guidance is given in first-aid manuals? All, correctly, teach that no attempt should be made to induce vomiting in an unconscious or semi-conscious patient or if there is reason to suspect poisoning with corrosives or petrol. They also concur in advocating the administration of mustard or common salt as emetics to the conscious patient, with an attempt to induce vomiting by pharyngeal stimulation running a close third.⁷⁻⁹ Medical textbooks, in contrast, offer diverse opinions. Pharyngeal stimulation is widely advocated^{6 10}—to which one author¹¹ adds with the "patient's own fingers" (once bitten?). The *Handbook of Poisoning*¹² suggests the use of ipecacuanha, pharyngeal stimulation, and adsorbent substances including activated charcoal. American authors have few doubts about ipecacuanha as a safe first-aid emetic.

It seems reasonable that the same criteria of safety and efficacy as are now accepted for prescribed therapy should be applied whenever possible to first aid remedies. In the light of available evidence, how do salt, ipecacuanha, mustard, and other emetic procedures rate? Sadly, it must be admitted that the case for most of them is scientifically thin. To take common salt as an instance, two tablespoonfuls in a tumbler of tepid water is the commonly recommended dose. But how often will this dose induce vomiting? And how big is a tumbler? And, more to the point, what proportion of an ingested dose of, say, salicylate may be recovered by this means and up to what time after it is taken?

Pharyngeal stimulation is often advocated, but one report¹³ found it was effective in only two out of 15 children when tried at home and in two out of 30 when attempted in hospital. In this same group all 30 patients vomited after syrup of ipecacuanha was given. It appears that only for this emetic are reasonably well documented, recent trials available, and evidence from these studies points to its safety and effectiveness, especially in paediatric practice.¹⁴

Latterly interest has revived in the use of activated charcoal.¹⁵ It might be used as a first-aid measure and may be effective if given early after the ingestion of poison.¹⁶ Clearly it should not be used until after vomiting has been induced. Or it might provide an alternative if the patient failed to vomit. It can be argued that a good or better case could be made out for the use of syrup of ipecacuanha, later supplemented by activated charcoal, than for mustard, salt, or pharyngeal stimulation. Perhaps the time is ripe for poisons centres and the compilers of first-aid instruction to get together and produce the evidence on which the best advice could be constructed.

¹ *Pharmaceutical Journal*, 1973, 210, 77.

² Smith, A. J., *British Medical Journal*, 1972, 4, 157.

³ Jackson, R. H., Walker, J. H., and Wynne, N. A., *British Medical Journal*, 1968, 4, 245.

⁴ Wigglesworth, R., and Williams, B. T., *British Medical Journal*, 1968, 4, 514.

⁵ Shirkey, H. C., *Journal of Pediatrics*, 1966, 69, 139.

⁶ Matthew, H., and Lawson, A. A. H., in *Treatment of Common Acute Poisonings*, 2nd edn. Edinburgh, Livingstone, 1970.

⁷ *First Aid: the authorized manual of the St. John Ambulance Brigade and British Red Cross*, 3rd edn. 1972.

⁸ *Baillière's Handbook of First Aid*, ed. Stanley Miles, 6th edn. London, Baillière, Tindall and Cassell, 1970.

⁹ Ward Gardner, A., and Roylance, P. J., *New Advanced First Aid*. London, Butterworths, 1969.

¹⁰ Burston, G. R., *Self-poisoning*. London, Lloyd-Luke, 1970.

¹¹ Laurence, D. R., *Clinical Pharmacology*, 4th edn. Churchill Livingstone, 1973.

¹² Dreisbach, R. H., *Handbook of Poisoning*, 7th edn. Oxford, Blackwell Scientific Publications, 1971.

¹³ Dabbous, I. A., Bergman, A. B., and Robertson, W. O., *Journal of Pediatrics*, 1965, 66, 952.

¹⁴ Boxer, L., Anderson, F. P., and Rowe, D. S., *Journal of Pediatrics*, 1969, 74, 800.

¹⁵ *British Medical Journal*, 1972, 3, 487.

¹⁶ Dordoni, B., Willson, R. A., Thompson, R. P. H., and Williams, R., *British Medical Journal*, 1973, 3, 86.