POISONING BY PRUSSIC ACID.

By Major E. A. Bourke.
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ATTEMPTED suicide by hydrocyanic acid is sufficiently rare in the Service to justify my forwarding the following notes of a recent case.

About 9.30 p.m., October 30, 1912, Private T. attempted suicide in his barrack room by swallowing 2 dr. acid hydrocyanic dil. B.P.; almost immediately afterwards he fell on the floor, and a comrade observing his condition immediately called Serjeant Harper and Corporal Mayes, R.A.M.C., who happened to be in the adjoining room. Serjeant Harper reported: "I found Private T. lying on the floor in a rigid, doubled-up condition; he was just able to inform me, with much struggling to breathe properly, that he had taken 2 dr. of prussic acid, as he wanted to die. I immediately applied cold effusions to head and neck, and sent at once for an antidote (precipitated oxide of iron and magnesia carbonate), and with assistance kept up artificial respiration.

In the meanwhile the other N.C.O. notified me on the telephone (fortunately there is a telephone in the barrack room). I ordered the artificial respiration to be continued and an emetic to be given, and arrived shortly afterwards. The patient's condition on my arrival appeared so critical that I did not regard his recovery as possible; he was convulsed, the pulse at the wrist was imperceptible, his face was livid and congested, the pupils were dilated, respirations convulsive, and the breathing appeared to cease for some seconds at a time, his breath smelling strongly of prussic acid. Artificial respiration and douching were kept up. I gave at once atropine gr. \(\frac{1}{2}\) hypodermically, with inhalations of amyl nitrite; the pulse improved somewhat. As the emetic had not acted well, I used the stomach pump, but owing to the rigidity of the jaws and the occurrence of convulsions, I had to withdraw the tube; this was followed by slight vomiting. Repeated doses of iron and magnesia carb. were given. A catheter was passed and urine withdrawn.

His pulse failed on several occasions and he had repeated attacks of convulsions with muscular rigidity and foaming from the mouth; hypodermic injections of atropine with inhalations of amyl nitrite were followed on each occasion by improvement in the pulse and more natural breathing. After about two hours he became conscious. and from this time he made a rapid recovery.

While in hospital the following day, the patient, an intelligent and well-educated orderly, wrote out for me a statement of his symptoms as follows: "I swallowed 2 drachms of hydrocyanic acid obtained from a local chemist; a few seconds after swallowing it my breathing became deep and convulsed, followed by violent contraction of the whole of my muscular system, especially of my jaws. I then became semi-conscious, my head and face felt very heavy and congested; I very shortly after
became unconscious. I recovered as from ordinary sleep, but not feeling fresh or strong."

Stevenson states "that the largest dose from which an adult has recovered was probably in a case reported by Burman in the Lancet. In this case 1 fluid drachm of prussic acid was taken in mistake; treatment was at once adopted and within half an hour consciousness returned, followed by quick recovery, and he sums up—from the facts observed we may assume that a quantity of B.P. acid (of 2 per cent.) about 50 grs. (i.e., 1 gr. of anhydrous acid) would commonly suffice to destroy life in an adult. When the dose is 2 drachms and upwards, death takes place in two to ten minutes."

The chief point of interest in this case depends on the quantity of prussic acid taken; it seems almost incredible that recovery should take place after taking 2 fluid drachms of prussic acid, i.e., over 2 grs. of anhydrous acid, yet a 2-drachm bottle, corked and containing only two or three drops of liquid smelling of prussic acid, was found by the side of the patient after he became unconscious, and on recovery the patient was most emphatic in his statement that he had swallowed the full contents of this bottle, and that he had procured this quantity (2 drachms) from a local chemist. I think there is no reason for doubting that 2 drachms were taken, and this is further supported by the acute onset, the symptoms of poisoning occurring almost immediately, and moreover, in all probability a fatal termination would have rapidly ensued were it not for the prompt and correct treatment adopted in the first instance by the two intelligent Royal Army Medical Corps N.C.O’s, who, fortunately for the patient, happened to be in the adjoining room.

OBSERVATIONS ON THE VALUE OF CERTAIN CHEMICALS FOR THE STERILIZATION OF WATER, MADE UNDER THE SUPERVISION OF CAPTAIN W. R. GALLWEY IN THE 9th (SECUNDERABAD) DIVISION LABORATORY.

By Private F. C. Boulton. Sherwood Foresters.

The following experiments were undertaken with a view to confirming the work of other observers on the value of chloride of lime and potassium permanganate as a means of purifying water for troops in the field.

CHLORIDE OF LIME.

Commercial chloride of lime purchased from a local chemist was used. Before commencing the experiment the powder was examined for free chlorine by the silver nitrate method and found to contain 0.3 part of free chlorine in 1 grm. of the powder.

Medical Jurisprudence Taylor.