I directed him to take chaulmoogra oil in drachm-doses thrice daily. The only inconvenience he experienced was slight constipation, which an occasional mild purgative removed. He has continued the same treatment. The ulcer on the leg rapidly healed. When I saw him a week ago, the spots had faded in colour and lost some of their thickening, while some had disappeared; and the anæsthesia was less marked, and his general health had improved.

I cannot but regard these as encouraging results, and perhaps an indication of a more hopeful means of combating this intractable malady.

I have found that there are some points of clinical importance to be observed in the administration of chaulmoogra oil. It should be given at first in small doses of three or four minims, which, as the stomach becomes more tolerant of it, may be increased to a drachm. It should always be taken after food. It is apt to produce constipation and sickness. I have found this is best combated by administering some mild purgative to ensure the regular action of the bowels, when the tendency to nausea generally disappears. In leprosy, at least, I am led to think that a much larger dose than that ordinarily given is required. I am in the habit of prescribing the oil as a mixture suspended in gum, or as an emulsion. It may be more elegantly administered in *perles* or capsules; and I have had some made containing fifteen minims each, which I find useful and convenient.

Chaulmoogra is the oil expressed from the seeds of the *Gynocardia odorata*. Its melting-point being high, it is semi-solid at the ordinary temperature. Its taste and odour are not disagreeable, and it comes to us with a high Indian reputation as a remedy for scrofula, skin-diseases, and leprosy. I am making trial of chaulmoogra oil in lupus and late forms of syphilis; and, in cases where cod-liver oil is not well borne, I have found patients improve materially while taking it.

NITRITE OF AMYL IN CHLORAL-POISONING.

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THE following case indicates so markedly the value of nitrite of amyl as an antidote in poisoning by chloral-hydrate, and otherwise presents so many other points of interest in connection with the symptoms produced by overdoses of that now much used and much abused drug, that I have yielded to the request of some of my medical brethren to make it public.

A. B., aged 62, of spare habit, was a frequent and intense sufferer from gout, in seeking relief for which he had unfortunately become somewhat addicted to alcoholic stimulants and narcotics generally. Late on the evening of the 23rd of April, after a liberal potation of whiskey, he took a large, but unfortunately an unascertained dose of his favourite anodyne, chloral. The dose must have been a very-large one, for within a very few minutes he became completely insensible. Fortunately, medical assistance being at hand, the case received immediate attention from the very commencement of the symptoms, which, however, became so alarming, that in about two hours I was sent for. I found that artificial respiration had been kept up for some time, but only with the effect of inducing feeble, superficial, gasping respirations, at the rate of four per minute. The surface was cold and deeply cyanosed, and the pupils strongly contracted to the size of a pin's head. The pulse, however, was 80, full, but soft and compressible. I had the tongue at once pulled forward, and maintained in that position with forceps. Taking the state of the pupils as an indication, and remembering Liebreich's theory of the decomposition in the system of chloral into chloroform, I immediately administered by inhalation from a handkerchief about twenty drops of nitrite of amyl. The effect was immediate. Within two minutes, warmth had returned, even to the extremities, and the surface had assumed the hue of health. Within ten minutes, the respirations had become much deeper, reaching nine per minute, and afterwards gradually increased up to twelve. The amyl had to be repeated in a smaller dose in about two hours, with permanent effect. At 9.30 next morning, the general condition was found to have improved somewhat, but there was no return of consciousness; and an attempt to give fluid nourishment by mouth had produced great embarrassment of breathing. I ordered an enema of brandy and Liebig's extract in arrowroot to be given, and repeated every two hours. After the second enema, the patient became quite sensible, recognised and spoke to those around him, and swallowed some food with little trouble. I saw him again at 6.30 P.M., when the water was drawn off normal in amount and quality. I am informed that he continued to improve until 9 P.M., when he suddenly started up as if from sleep, with staring eyes, threw up his hand, uttered a cry, and fell back dead. I am inclined to think this

fatal result might possibly have been averted by a more copious and frequent stimulation *per anum*.

The principal points of interest to be noted in this case are the extreme contraction of the pupils; the intense affection of the respiratory, the complete immunity of the circulatory, system; the rapid recovery of warmth and colour, with restoration of the respiratory function under the influence of nitrite of amyl; the return of consciousness in response to stimulation *per anum*; and the sudden failure of the heart's action, which proved immediately fatal.

In cases of poisoning by chloral-hydrate, very opposite observations are on record with reference to the state of the pupils, and also, as to the relative extent to which the action of the heart and lungs is influenced by the drug. Mr. W. Sedgwick, who has made a special study of the subject, states that in most instances the pupils are contracted; while Dr. Cleveland, and especially Dr. B. W. Richardson, report the contrary to be the invariable condition. I believe that the explanation of these apparently discrepant phenomena must be sought for in the difference in the amount of the drug swallowed, and the corresponding rapidity of its action. When chloroform is administered in excess *too rapidly*, it seems to prove fatal by paralysing the respiratory centres, while the pulse remains comparatively unaffected, the pupils being *contracted*; but when chloroform inhalation is kept up *too long*, so that the drug accumulates slowly in the system, the heart first yields to its influence, and succumbs earlier than the respiration, and under these circumstances the pupils will be found *dilated*. I have ascertained these conditions, both experimentally in the lower animals, and from a large experience of chloroform administration commenced twenty-two years ago, while assistant to the late Sir James Y. Simpson. A parallel discrepancy in symptoms may be noted also in cases of delirium tremens, where the phenomena of the attack have been developed as a result of prolonged drinking to excess, or from one deep debauch.

Liebreich, the discoverer of chloral-hydrate, believes that it acts on the system by being resolved into chloroform from decomposition in the presence of an alkali; and although this opinion is purely theoretical, yet it must be admitted that there are marked and close resemblances both in their physiological and therapeutic effects. This would at once explain why nitrite of amyl should be the best antidote in chloral-poisoning, much more certainly than strychnia, which has been proposed as its antagonist; while, strangely enough, nitrite of amyl itself is proposed by Dr. B. W. Richardson as the antidote to strychnia poisoning. May it not be that nitrite of amyl will prove the appropriate antidote when the drug has been administered in such quantity as to act rapidly on the respiratory centres, *with contracted pupils*, and that strychnia should be given when the drug has acted slowly as a cumulative poison when the heart has succumbed, *and the pupils are found dilated*?

THERAPEUTIC MEMORANDA.

HIGH TEMPERATURE TREATED BY THE APPLICATION OF ICE.

ON the 27th May, I was called by an Italian physician in consultation on a case of typhoid fever occurring in a German lady. When seen, she was in a comatose condition; her pulse was 144; her temperature 107.6° F. The application of cold was considered advisable, and it was carried out by means of cloths wrung out in iced water, which were placed on the thorax, abdomen, thighs, legs, arms, and head, and incessantly replaced by others. By this treatment, assiduously kept up for one hour only, the temperature was reduced to 99.7°; and the case has (with the exception of alarming hæmorrhage from the bowel) progressed favourably, and is now approaching convalescence.

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ERUPTION PRODUCED BY MORPHIA.

MRS. T. applied to me, in February 1879, for the relief of sleeplessness and considerable nervous depression. After a short attendance, I had occasion to prescribe some linctus of morphia (University College Hospital *Pharmacopœia*) in teaspoonful doses, and two days later she returned covered from head to foot (even the hands and feet, and face) with a bright erythematous eruption, looking at a short distance uniform and diffused, and in prominence something between measles and scarlatina. The skin was considerably swollen, and great distress was occasioned by the itching and pricking. The eruption, when more closely examined, was seen to be made up of conical papules, originally distinct, but later aggregated together, of the size of an ordinary pin's head, and there could be little doubt that they were congested follicles. In a few days, active desquamation ensued, and all signs of the rash quickly dis-