following upon this some degree of febrile irritation, and then phlegmasia dolens of the same side was developed. These cases were conducted under the antiseptic method. The phlegmasia dolens gradually subsided. Both made good recoveries.

In rheumatic fever, we find another illustrative example. Indeed, this disease and pregnancy present, perhaps, the two most striking examples of quickly induced hyperinosis. In rheumatic fever, then, we have large excess of fibrin. To cause coagulation, a chemical irritant is wanted. This is found in the acid or other products retained in the blood. Fibrin becomes precipitated on the valves of the heart.

One condition seems common to most of the forms of thrombosis: that is, more or less sudden overpowering of the excreting organs, involving retention of matters that should be ejected. Thus, we frequently observe as an immediate cause of thrombosis, suppressed action of the skin from exposure to cold; and the thrombosis which in some cases follows quickly on physical and mental shock may be explained by the sudden arrest or disturbance of glandular action.

Cruveilhier distinguished two forms of what we now call thrombosis: 1. Adhesive phlegmasia; 2. Suppurative phlegmasia. In the first or adhesive form, we see the healthy conservative process of thrombosis blocking the entry of poisonous matter into the general mass of the blood and sequestering it in the veins invaded. In the second or suppurative form, we see the failure of the conservative or blocking process. There is thrombosis, but the clotting is imperfect. This is generally the case in the thrombosis which precedes death from cancer of the uterus. Wanting in firmness, probably from the beginning, in fatal cases (and it is most commonly fatal) the clots are found soft, pulsatious, easily breaking down, running into puriform fluid, and often extending far down the femoral veins and high up the vena cava. These cases are characterised by an earthy aspect, low fever, and general depression; in these respects contrasting with the general condition observed in the conservative form. The local characters are not less distinct. The conditions of the affected limb in pure phlegmasia dolens are well known. The leg is tense, greatly swollen, firm, resisting pitting, white, and shining. In the unhealthy "suppurative" form all is different. The leg is less swollen, it is puffy, doughy, pitting on pressure, the skin is dull in colour, and it is not tense enough to shine.

The first form tends to recovery; the second to death. In the first form, the great glandular organs are healthy; in the second, they will often be found diseased; that is, the liver and kidneys are affected with lardaceous or other chronic degeneration. These degenerations or other imperfections of the liver and kidneys are a chief cause of the mortality of puerperal fevers, and of some cognate deaths after ovariotomy.

I will not intrude upon you other analogies. Many will present themselves to your minds. I will only hint at the close pathological relations between these cases of so-called phlegmasia dolens in childbed women and septicæmic puerperal fever, pelvic cellulitis, and pelvic peritonitis and inflammations of other serous membranes.

Phlegmasia dolens may be taken as the type of what I long ago proposed to call the "autogenetic" puerperal fever, in contradistinction from those fevers which owe their origin to empoisonment from without, the "heterogenetic" fevers. But we must not forget that phlegmasia dolens may ensue upon the ingestion of foreign poisons.

The great clinical lessons illustrated and enforced by the very imperfect remarks which I have been invited to submit to you are these.

1. The origin of phlegmasia dolens in lying-in women can mostly be accounted for by processes springing up in her own system.

2. The blood of the recently delivered woman is in a state highly prone to coagulate.

3. It will coagulate when it is invaded by effete materials or septic matter in undue proportion to the excretory power of the system.

4. Such undue proportion will accumulate when the free action of the great excretory organs, the breasts, lungs, liver, kidney, skin, and mucous membrane of the intestines is greatly impaired by chronic antecedent imperfection, or is suddenly checked under the influence of cold, emotion, or other form of shock.

To anticipate these causes, to prepare and to keep the glandular system in good working order, to prevent the accumulation of poisonous matter in the blood, is the obvious indication, one which we ought to be able in most instances to carry out.

The theories or hypotheses of thrombosis arising under conditions other than puerperal must be in harmony with what is observed in puerperal thrombosis.

THE CHINESE AMBASSADOR.—His Excellency and suite and upwards of five hundred ladies and gentlemen honoured Professor and Mrs. Flower with their company on Saturday week in the Museum of the Royal College of Surgeons, when the whole of the institution was thrown open to them.

CHAULMOOGRA OIL IN LEPROSY.

By WYNDHAM COTTLE, M.A., M.B.Oxon., F.R.C.S.Eng., etc.
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THE following cases are, I think, especially interesting on two grounds: that they illustrate the use of a comparatively little known remedy, and are a record of an early stage of elephantiasis Græcorum occurring in England.

CASE I.—T. W. is now eighteen years of age. His father, an Englishman born in England, went to India. His mother was born in that country of English parents. He affirms that his parents and his three brothers, with whom he lives in London, are free from disease; and that there is no history of skin-affection in the family. Born in Calcutta, he resided and travelled in India until November 1875, when with his family he moved to London, where he has since remained in comfortable circumstances. In England, he has always lived well; and he tells me that in India his food was much the same, with no excess of fish.

The first symptom of the disease showed itself in June 1877, as a spot as large as a sixpence over the angle of the jaw on the left side, the site of which was marked by a dark stain. Previously to this, his health had been excellent. The development of this spot was followed by pains in the limbs that lasted about two months. He then noticed that the right fore-arm on its outer aspect had become marked with a brown discoloration. From August to October 1877, small round tubercles, dark coloured, about the size of split peas, with somewhat depressed centres, appeared on the backs of the hands. Similar tubercles showed themselves over the face; but in these the central depression was absent, and the colour lighter. Conjunctival injection took place from the first attack. These symptoms persisted and increased. Tubercles of like character developed on the feet; and, in May 1878, patches of brown staining, which at first were of a dull red colour, swollen and hyperæmic, were visible on both arm and legs. The back of the right hand and portions of the right leg were also distinctly anæsthetic.

In October 1878, his condition was as follows. He had tubercles, as described, on the face, the backs of the hands and feet, and the inner surface of the lower lip, with one on the left conjunctiva. The limbs, especially on their outer aspects, were deeply pigmented, dry, and scaly, most marked on the right side. The back of the right hand and the outer surface of the right leg were anæsthetic. The finger-joints were also uniformly enlarged. There was no loss of hair, and the ears were unaffected.

At the end of March 1879, all these symptoms had passed away, except a more limited and less pronounced anæsthesia in the above mentioned parts, and somewhat raised dark spots on the face and backs of the hands, corresponding to the positions occupied by the tubercles, with some thickening of the finger-joints.

From March 11th till September 18th, 1878, all the ordinary remedies were employed, but the disease steadily advanced; when I administered chaulmoogra oil in five-minim doses twice daily. The patient experiencing no inconvenience, I successively increased the dose to ten and twenty minims three times daily, then to forty and sixty minims thrice a day, which he is now taking. The disease began to mend from the time the chaulmoogra oil was given, and very much more rapidly with the larger doses, the improvement being noticeable week by week during the last six weeks, while he has been taking the oil in drachm-doses. I also directed him to apply daily to the affected parts an ointment of twenty grains of chaulmoogra oil to an ounce of lard.

CASE II.—T. M. was born and spent his youth in England. After residing twenty-seven years in Jamaica, he returned to London in November 1877. He noticed the first symptoms of his disease in May 1878, when large patches of discoloration appeared on his legs, followed by similar spots on the face and arms. A tonic treatment was first employed; and in September 1878 chaulmoogra oil in small doses was given, which was increased to twenty minims three times daily. This he continued to take till March 10th, 1879, when I first saw him. He stated that his condition improved when he commenced to take the oil, but the complaint recurred in a more marked degree.

On March 10th, 1879, he presented the following appearance. He was hale and well nourished. There were dusky red raised patches, two or three inches in diameter, scattered over the face, neck, body, and limbs, with the characteristic leonine expression of countenance and thickening of the ears and of the tissues in the positions occupied by the spots. A superficial ulcer existed on the outside of the left leg, and one spot on the right thigh; and the insides of the feet from the great toes to the heels were anæsthetic.

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-