occasion leaving the bougie *in situ* for about ten minutes. Within ten days before a period, it is not advisable to use the bougies. The process is repeated, until No. 12 can be passed easily. In some cases, those especially of corporeo-cervical antelexion, the process is undoubtedly a painful one; and in any, it may have to be intermitted occasionally for acute congestive symptoms; and in all it is needless to say it must be employed with judgment. I can but add that, in a very large number of cases the result has been highly satisfactory, and followed by distinct alleviation of the worst symptoms of the flexion, direct and indirect. In conjunction with this mechanical treatment, attention is also paid to whatever may be the associated pathological condition of the uterus. If, for example, there be endometritis, it is quite appropriate to carry out suitable intrauterine applications in the usual manner. Any associated disorders of the vagina or bladder may also be treated concurrently; and it is almost needless to add that attention to the general health is invariably considered of the first importance.

Note.—June, 1881. Since the above was read at the Cambridge meeting last August, I have been using, for cases of retroflexion of the uterus, a modification of Hodge's pessary which has given me much satisfaction. In all the Hodge's pessaries with which I am familiar, the sacral end, which supports the fundus uteri, is more or less rounded. The result is a constant tendency on the part of the fundus uteri when resting on it to slip to one or other side. The posterior aspect of the fundus being rounded, and the pessary rounded also, it can only give the uterus support at the point of contact. I have therefore had the sacral or upper cross-bar of the pessary made with a central depression, the convexity looking downwards instead of upwards. On this the uterus securely rests; and while a steady equable pressure is thus maintained by the pessary on the fundus, all lateral shifting of the instrument is obviated. These new pessaries are made by Messrs. Walters, of Palace Road, Lambeth.

THE DIRECT METHOD OF ARTIFICIAL RESPIRATION FOR THE TREATMENT OF THE DROWNED, STILL-BIRTH, ETC.

By BENJAMIN HOWARD, A.M., M.D., F.R.C.S. Ed.

II.

COMPARED with the apnoea from drowning and with that from chloroform narcosis, the apnoea of the newly born presents features different and distinctive.

In contrast with other methods, each of which has but one process alike for the drowned adult, for the still-born infant, and for all other cases of apnoea whatsoever, the direct method has, for still-birth and for apnoea from other causes respectively, adaptations and provisions correspondingly different and distinctive.

Of the principal distinctive conditions in apnoea neonatorum requiring special modifications of the ordinary treatment for apnoea, may be mentioned:

1. The occasional temporary continuance of the circulation in the funis;
2. The unused state of the lungs.

In view of the occasional continuance of the foetal life in apnoea neonatorum, the ability to continue the treatment for the respiratory life, without the first and customary sacrifice of the foetal life, must be admitted to be of no small importance. The lungs having never been used are objectively, I think, less readily receptive of air in response to the ordinary mechanical means of artificial respiration. The early and regular alternation of insufflation with these means, therefore, greatly promotes and ensures an exchange of air, the failure to obtain which may otherwise be complete, and also unnoticed. Both these important desiderata, though impossible by other methods, will be found to be easily practicable by the direct method; and this before the division of the funis, as well as after it.

Of other distinctive subjective conditions, the undeveloped state of the respiratory muscles may be noticed in passing, the medium between the extended arms, after the manner of Sylvester, and the alleged consequent thoracic expansion, being therefore comparatively wanting. *Per contra*, the very incomplete ossification of the ribs renders the entire lower part of the chest particularly susceptible to the direct compression by manipulation, according to the method under consideration. Assuming that the direct method, as it has been explained by me, for the treatment of the drowned (see BRITISH MEDICAL JOURNAL for June 18th, 1881), is more or less familiar, it is needless to say that the treatment to be described for apnoea neonatorum is, of course, simply an adaptation by which the same principles may be applied, with the greatest convenience, in the very different conditions of still-birth. Briefly stated, the child at birth so rests in the left hand of the opera-

tor as to make the chest prominent, the shoulders rather dependent, and the head hang free; while the thoracic compression is made at will by the right hand. Also: in addition to anything attempted or practicable by other methods, insufflation and the movements for expiration are easily and rhythmically practised before division of the funis, when expedient, as readily as afterwards.

Although the treatment of apnoea neonatorum, unlike that of the drowned, falls to those only who, being more or less expert, require suggestion rather than direction, it may not be amiss to describe more in detail the course which I have more generally been accustomed to follow.

Assuming, then, the possibility of some remaining circulation in the funis, and that smart slaps, alternate dashes of hot and cold water, etc., have failed to awake natural respiration, I receive the child in the left hand—so that its buttocks rest upon the fingers, and its head falls by its own weight over the forearm or wrist. The little thorax, thus brought prominently forwards, is grasped by the right hand (as seen in the accompanying engraving), by which the desired compression is readily located, distributed, and alternated, as may be expedient. As a rule, the compression is made gradually and thoroughly in about three seconds; then, suddenly letting go, I rest about three seconds, to allow a complete rebound; then repeat the bellows-movement at about the rate of ten or twelve a minute. If within the first minute or two there be still no natural respiration, I get an assistant at once to practise mouth-to-mouth insufflation in the following manner. The mouth of the infant having been thoroughly cleansed and dried, the assistant closes the nostrils of the infant with one hand, while the forefinger of the other hooks forward the tongue—the middle or little finger meanwhile pressing firmly back the larynx. Mouth-to-mouth insufflation of fresh air being now steadily and forcibly made, none of the air will pass down the oesophagus, but will so directly enter the lungs that the entire thorax may be seen so to expand that, in many cases, the lower intercostal depressions will be quite obliterated. At first, it is well to make the insufflations alternate with the compressions regularly, and so continue this for about five minutes. By this time, any good which may have been hoped for from the maternal connection has almost certainly ceased, and the funis may be divided. The artificial respiration, with regular or only occasional alternations of insufflation, may now be resorted to; and, if preferred, with all but the head of the infant in a warm bath, or covered loosely with flannel. Without interrupting the process, friction-electricity also, or, if desired, even tracheotomy, may now be superadded, according to the preference of the operator, each one of which may be practised without interfering with the other. The position of the infant's head, which should, as nearly as possible, be that of utmost extension, as I have elsewhere described (see *Proceedings of the Royal Medical and Chirurgical Society*, part 67, page 332, and BRITISH MEDICAL JOURNAL, June 18th, 1881) not only ensures the complete raising of the epiglottis, but also increases the antero-posterior diameter of the entire pharyngeal air-way to the glottis. By this position, too, the mouth of the infant is most conveniently accessible to the assistant, who, on the other hand, is quite out of the way of the principal operator.

So much for a mere outline of my own general procedure in an average case. Respecting the time for dividing the funis, and many other details, probably no two persons would precisely agree—nor is it important that they should. Indeed, in cases like these, where every resource can be on hand in advance, few practitioners of experience would be content to confine themselves to any single course: hence the convenience to such of the direct method, which, in contrast to other methods, maintains respiration in a way so simple as to allow almost any other means of resuscitation whatsoever to be used, at discretion, simultaneously.

A curious confirmation of the efficacy of the head-down position is afforded by an old empirical German custom, which I have noticed particularly in Bonn. It consists simply in swinging the infant by the heels, describing a half-circle, as many times as may seem desirable. I was assured the plan was frequently successful; and the explanation of its *modus operandi*, as given in the direct method, concerning the opening of the glottis thus induced, has been fully appreciated there. This, with the changing relations of the diaphragm, makes it clear how this procedure may have come to be regarded as an effective one.

In the physiological laboratory, the superfluous motions of the methods of artificial respiration, which have been in vogue for persons, have never been practised. In the most prolonged vivisections and experiments, simple direct thoracic compression, and, if necessary, tracheotomy, with alternate inflation, perhaps, have always been and are still the only and constant reliance.

Besides certain other incidental advantages, I think I have shown :

1. That the compression attempted by other methods is, by the direct method, easier, more complete, and better regulated.
2. That, in addition to what is attempted, or is possible, in other methods, everything pertaining to the direct method is practicable before, as well as after, division of the funis.
3. That it provides for easy and thorough insufflation.
4. That it is compatible with the simultaneous use of every other adjunctive procedure.

Although the direct method, in its application to apnoea neonatorum, has been but little promulgated, compared with its rules for the treatment of the drowned, the experience with it in England, as well as in the United States, has so far more than confirmed its superior advantages as above indicated.

CHAULMOOGRA-OIL AND GYNOCARDIC ACID IN THE TREATMENT OF SKIN-DISEASES.

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THE high opinion I had formed of chaulmoogra-oil, both as an internal remedy and as a local application in some cutaneous affections, led me to expect that its active principle—gynocardic acid—when freed from the other constituents of the oil, would give results both more uniform and energetic. I have used chaulmoogra-oil and gynocardic acid side by side, and the following summary of the results of my experience of them may, I hope, lead other observers to make trial of these agents, and add to our knowledge of their action. When given internally, gynocardic acid appears to be assimilated, and but rarely produces nausea—in this respect being less objectionable than chaulmoogra-oil. In nearly all cases, the nutrition of the body seems to improve while either the oil or the acid derived from it is being taken, and a gain in weight is sometimes noticeable. It is especially beneficial in diseases depending on general malnutrition. Rheumatism and gout have been found to improve rapidly under the use of chaulmoogra-oil; and it is of undoubted efficacy, too, in some late forms of syphilis. The difficulty of giving chaulmoogra oil, owing to its taste and odour, and the necessity of ordering it in perles, have militated against its general employment. The substitution of gynocardic acid, which can readily be given in the shape of pills, will remove these objections, and bring it within the sphere of practical medicine.

Applied locally, chaulmoogra-oil and gynocardic acid are demulcent and lubricant; but, like all greasy substances, act more benignly when the acute stages of inflammatory action have passed.

Leprosy.—I have had the opportunity of trying gynocardic acid in but one case of this disease. The patient had been taking chaulmoogra-oil in large doses for over a year; and the complaint had passed into a quiescent state, with gradual amelioration of the symptoms, and without experiencing a relapse. He took three grains of gynocardic acid daily for about four months, and felt no inconvenience. During this time, the skin-staining faded somewhat, and the areas of anesthesia contracted and became less pronounced.

Psoriasis.—Chaulmoogra-oil and gynocardic acid are not sufficiently stimulating as local applications to cause any marked improvement in the ordinary chronic cases of this disease. Where much burning and pain are present, or the tracts of inflamed skin are stiff and fissured, I have found an ointment of one to two drachms of chaulmoogra-oil with an ounce of vaseline, or of about twenty-five grains of gynocardic acid in an ounce of vaseline, applied three or four times daily, give great relief and promote healthy action in the part. The internal remedies suit-

able to each case should be employed simultaneously, and gynocardic acid may generally be given internally with advantage.

In lichen planus, in lichen scrofulosorum, and in some cases of relapsing prurigo, a similar use of chaulmoogra-oil or gynocardic acid often acts most beneficially, in conjunction with the appropriate internal treatment.

Eczema.—After treating a large number of cases of this disease with chaulmoogra-oil or gynocardic acid, I find it is as a local application in some forms of this most frequent of skin-diseases that both chaulmoogra-oil and gynocardic acid are such valuable servants. In persons with delicate skins, the portions of the cutaneous surface that are uncovered, or exposed to the action of accidental irritants, as the face, the hands, and the arms, are peculiarly liable to attacks of painful and most troublesome eczema. In these situations, often from the difficulty of removing the exciting cause, such an inflammation is frequently most rebellious under treatment, and very apt to recur. When eczema affects the face, it is sometimes acute, and generally intolerant of local applications. In such cases as these, and in the more chronic form, when it shows itself as patches of dry eczema, I have found an ointment of gynocardic acid of from fifteen to twenty-five grains to the ounce of vaseline almost a specific, when most of the ordinary applications in use only served to aggravate the local mischief. The ointment should be applied three or four times daily, so as to keep the affected parts lubricated with it. Again, in eczema of the hands, such an ointment is the most generally useful application with which I am acquainted. I have seen many most obstinate examples of this disease affecting the hands, which had in no way improved under treatment by the ordinary measures, rapidly heal under the application of gynocardic acid ointment. The ointment should be used of about the above-mentioned strength, and should be applied four or five times daily; or, if the patient can bear the inconvenience, the ointment should be spread on soft rag and laid over the affected part, and may be kept in position by wearing gloves, or by a few turns of bandage. Very useful and soothing also are both chaulmoogra-oil and gynocardic acid when applied in this way in eczema of any part of the body; but it is in cases where this disease attacks the face and hands that I have found them so pre-eminently beneficial. I have met with no ill effects consequent on their use, nor do they exert any action on the sound skin. The employment of such local measures in no way interferes with nor removes the necessity of the assistance of the internal remedies adapted to each case. In the acute form of this disease, or where there is much discharge, the good effects following the use of chaulmoogra-oil or gynocardic acid locally applied are not so marked.

Lupus.—Some cases both of the tubercular and erythematous forms of lupus improve under the local and internal use of gynocardic acid or chaulmoogra-oil; but I have not found them alone sufficient to remove the disease.

The amount both of chaulmoogra-oil and gynocardic acid that individuals can take internally varies greatly. The oil, and the acid, in less degree, are both apt to produce nausea, and occasionally constipation. It is well to begin with a small dose, about four minims of the oil or half a grain of the acid, which should be taken after food twice or thrice daily, and gradually increased to half a drachm to a drachm of the oil, or one to three grains of the acid. An aperient should be given at the same time, if necessary. The oil may be enclosed in perles, which is the most agreeable mode of administering it if only a small dose be required; or it may be given in emulsion. It is convenient to have the gynocardic acid made into pills containing half a grain of the acid, with three grains of extract of gentian, extract of hops, or conserve of roses. To commence, one such pill may be given thrice daily. The amount may be gradually increased to two, three, or four pills for each dose. If larger quantities be required, it is then better to order pills containing from one to two grains of gynocardic acid.

The chief advantages of gynocardic acid over chaulmoogra-oil are, that, in using it, we are dealing with the active principle of the body, and a definite substance, rather than with an uncertain mixture; its more certain and marked action; its lessened bulk; and the facility with which it can be administered in pills.

The constitutional effects of the drug may be obtained by the inunction on the skin of chaulmoogra-oil, or of gynocardic acid in the form of ointment. This is especially useful in the case of children. Gynocardic acid might be combined with a soap with advantage. I should expect such a soap to possess much of the soothing and remedial influence of the gynocardic acid, and that it would probably be useful in the treatment of many forms of skin-disease.

DURING the past ten weeks of the current quarter, the metropolitan death-rate averaged 20.5 per 1,000, against 22.9 and 19.2 in the corresponding periods of 1879 and 1880.