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Selections: Medicine.

THE USE OF DIGITALIS IN DISEASE OF THE AORTIC VALVES.

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The means by which digitalis is useful in diseases of the mitral valve, where its utility is almost universally admitted, cannot detain our attention at present. Its use in disease of the aortic orifice is the division of the subject with which we are engaged to-day.

The power of digitalis to induce more powerful contraction of the muscular walls of the heart is now generally admitted. The evidence does not rest merely upon careful clinical observation, but upon the less complex and more valid testimony of direct experiment. The weight of evidence thus furnished from these two sources is such as to be irresistible with the majority of medical men; a few, however, are still unconvinced. My own attention has been very powerfully attracted to the action of this drug for a number of years; and the more extensive my experience, the greater is my confidence in digitalis in all cases where it is desirable to induce more powerful ventricular contraction. It relieves palpitation by substituting a normal and comparatively unfelt contraction for the sensible stroke of laborious effort.

Before proceeding to explain the action of digitalis in disease of the aortic valves, we must first glance at the pathology of aortic valvulitis. The function of these valves is to close the aortic orifice and prevent the regurgitation of blood into the ventricular chamber on the

aortic recoil. The ventricle at each systole throws so much blood into the aorta, which being elastic, is distended; the recoil or systole of the aorta closes the aortic valves, which prevent reflux of the blood, and so the blood is driven forward by the aortic recoil into the smaller arteries. When the obstruction to the blood-flow from the aorta is increased, two different actions or morbid processes ensue. First, the blood-pressure is raised and the obstruction to the flow forward of the blood on the ventricular systole is increased, and hypertrophy of the muscular walls follows. Then the ventricle is enabled to cope with the increased obstruction to the blood-flow, and the ventricle can empty itself completely at each systole. Such is the simple hypertrophy of Bright's disease in its earlier stages, and these are the patients who afford us most of the aortic valvulitis of advanced life; the aortic valvulitis induced by muscular effort is chiefly found in young men. We have then an obstruction to the blood-flow, an increased blood-pressure, and a powerful ventricle, and the result is, that the aorta is unduly distended at each ventricular systole. The rebound of the elastic aorta, commonly termed the aortic recoil, is in strict proportion to the amount of distension, and consequently, with an abnormally powerful recoil, the valves at the base of the aorta are violently closed. This gives the accentuated aortic second sound so significant of this condition. Not only that, but the powerful closure leads to valvulitis and a growth of connective tissue corpuscles in the valvular vena. Distortion, then, is thus produced, and the valves either present an obstacle to the forward flow of the blood, or they fail to arrest regurgitation on the

aortic systole ; or these conditions may be found combined. Hayden gives aortic obstruction and regurgitation as the most common of combined valvular lesions. Whether contraction of the valves will follow this growth of connective tissue or not, cannot be foreseen ; it is certain, however, that regurgitation from insufficiency is more common in young persons, while thickening of the valvular vela so as to constitute obstruction is more common in elderly persons.

In aortic stenosis or obstruction, the valves are not only thickened and rendered much stiffer than they are normally, so as not to yield readily to the pressure of the blood on the ventricular systole, but the process of chronic inflammation involves the base of each segment or cusp, and the growth of connective tissue there leads to contraction of the conus, and so stenosis is induced ; consequently the ventricular wall has in its contraction to overcome a new resistance in the form of stenosis with rigid valves, as well as the normal resistance of the elastic aortic walls or the blood-pressure. Under these circumstances, simple hypertrophy without dilatation is found ; in aortic regurgitation, the centrifugal distending force of the aortic reflux produces enlargement of the ventricular chamber. In aortic stenosis, we have a narrowed orifice with an increase in the driving power, and thus a new balance is maintained. Pure aortic stenosis is a disease which often exists a long time ere it is discovered, and commonly its recognition takes its origin in an examination for insurance. There is usually no enlargement of the ventricular chamber, and the hypertrophied heart secures a normal circulation of blood. At other times, medical aid is sought and relief is furnished by the administration of digitalis. At first, Sir Dominic Corrigan explained this beneficial result as being due to the slower contractions induced by digitalis ; and that a longer systole gave more time for the blood to pass the narrowed orifice. If this were the case, the arteries would still remain unfilled as before ; and, if the ventricular contractions are more complete, they would be so many fewer in the minute, and the amount of blood passing the aortic orifice in a given time would remain the same. But digitalis

does not so lengthen the systole, and Balthazar Foster says : "The diminution in the frequency of the heart's beats under digitalis always means an increase of the period of the dilatation of the ventricles. Pulse-traces readily show this." In aortic stenosis, Nature, when her efforts are sufficient for perfect compensation, does not achieve a new equilibrium by retarding the ventricular contractions, but by hypertrophy of the ventricular walls. So with the beneficial effects of digitalis, these are not the outcome of a prolonged systole, but of an increase in the driving power, brought about by more active ventricular contraction. Where, then, a left ventricle is found faltering before, or rather behind, an aortic stenosis, digitalis will restore the lost equilibrium, and by enabling the ventricle to drive an equal quantity of blood through a narrowed orifice in an equal time, a new balance is attained, and a normal blood-flow is secured. It may be urged, and with justice, that the effect of digitalis is to produce contraction of the peripheral arterioles, and so raising the blood-pressure to create a new or additional obstruction to the blood-flow ; but, practically, this is of no moment ; it is not the blood-pressure in the arteries which taxes the powers of the left ventricle ; it is the tight stenosis against which it has to struggle. The effect upon the heart more than counterbalances the action upon the peripheral vessels when digitalis is given.

The changes which lead to aortic regurgitation, and the subsequent alterations in the muscular walls of the heart, and the indications for treatment furnished by them, will now engage our attention.

In the form of aortic valvulitis which leads to insufficiency rather than stenosis, though very commonly these two forms are combined, it seems that the free edges of the semilunar are effected rather than the base. The consequence is, that the valves shrivel along their free edges, and, though not presenting the same obstruction to the blood-flow as is the case with the rigid, thickened valves, they are incompetent and insufficient to completely arrest the backward flow of the blood on the aortic rebound or systole. The changes in the walls of the heart which follow

aortic regurgitation are worthy of careful consideration, and teach us a most instructive lesson in the study of cardiac pathology. This hypertrophy of the heart is the means by which dilatation is arrested rather than a measure to increase the power of the ventricles, and enable it to overcome some obstruction. We are much too apt to assume that the latter is essentially the condition which evokes hypertrophy. I will arrange the evidence as briefly and tersely as the subject permits. 1. Hypertrophy does not always follow an obstruction to the flow forward of the blood on the ventricular systole. Though it is the common result, it does not always form the result. In anæmic systems, in chronic Bright's disease, dilatation is found instead of hypertrophy; this is especially seen in women. 2. Hypertrophy is found under circumstances where there is no obstruction to the blood flow, notably in the hypertrophy of the left ventricle so commonly seen in mitral regurgitation (Niemeyer, vol. i, p. 318, ed. of 1870). Again, as the same authority tells us, hypertrophy is frequent in cardiac dilatation, the result of partial myocarditis accompanying pericarditis (p. 298 of the same edition), by which the dilatation is limited. In both these instances, there is no obstruction to overcome, but in each there is a dilating process to be arrested. In mitral regurgitation, the blood rushes into the left ventricle with unwonted force from the distended auricle and veins behind it, and a dilating process is so set up, which, in well nourished organisms, is limited by a growth of muscular fibre. There is no similar enlargement of the left ventricle in mitral stenosis, though there the auricle and pulmonary veins are equally distended; but then there is an abnormally small, and not an unnaturally large orifice, through which the blood can flow furiously into the left ventricle. In the case of softened walls, leading to dilatation by the normal inrush of blood, the dilating process sets up hypertrophy sooner or later; sooner in well nourished organisms, later in debilitated systems. How dilatation induces hypertrophy, cannot be given here. It is not the place, even if the time could be spared.

This brief digression will enable us all the more readily to see that, in pure aortic regurgi-

tation, the growth of the walls of the heart is not the result of any obstruction to be overcome; for none such exists, or, if so, only to a trifling extent. But there is a dilating process to be arrested. When the aortic valves are rendered incompetent, the left ventricle is no longer filled solely by the blood coming in from the auricle and pulmonary veins—a comparatively calm current—it is also filled by a second blood-current—the blood driven backwards by the aortic rebound through the insufficient aortic valves. The distending power of this new current is a very different matter from the normal current, which is itself undiminished. There is, indeed, no diminution in the normal distending force, while there is added to it a new force of unusual and unwonted power. The ventricle is now, in fact, distended by the aortic recoil, and the regurgitant current possesses great distending force. The ventricle yields before this new force, and dilatation would soon become marked and the ventricle be placed *hors de combat*, if it were not for the hypertrophy which, coming to the rescue, arrests the dilating process and limits the dilatation. It is under these circumstances, indeed, that we find the most massive hypertrophy—the *cor bovinum* in fact. The hypertrophy is not to overcome obstruction here, but to arrest dilatation. It is necessary to be clear about this, in order to comprehend the indications for treatment. We do not, under these circumstances, require more forcible ventricular contraction—the effects of digitalis; for the powerful and enlarged ventricle is already working ruin in the arterial walls, which, at every systole, are distended by the contraction of a ventricle, not only much more powerful than a normal ventricle, but holding a larger quantity of blood. The overdistension to which the arteries are subjected produces chronic parenchymatous inflammation of their walls, or atheroma (see an article by the writer in the *Philadelphia Medical Times*, August 7th, 1875, on "Atheroma"), and to administer digitalis here is to aggravate the evil. Already the contraction of the enlarged ventricle overdistends the arteries, so that the pulsation may be seen in the arteria centralis retinae with the ophthalmoscope; and, to administer an agent like digitalis, which, as Balthazar

Foster tells us, prolongs the diastole, would be injurious. By delaying the diastole, the ventricle will be all the fuller, and all the longer exposed to dilating forces; while the action of digitalis in producing a more vigorous contraction of the ventricle will only tend to all the sooner ruin the arterial walls. The agent here, if we possessed a drug of such properties, would be one which should lessen the diastole and limit the force of the ventricular systole; the antagonist, indeed, of digitalis. In the early stages of aortic regurgitation, then, digitalis is contraindicated. Such, however, is not the case in the more advanced or later stages.

In order to make this clear it is necessary to trace the further progress of aortic regurgitation. We stopped the inquiry above at the point of massive hypertrophy; we must now follow the downward progress of this pathological process. The arteries, as we saw, became atheromatous from the overdistension to which they are subjected, and they lose their elasticity, and so the arterial recoil is diminished. This would be beneficial in reducing the dilating power of the regurgitant current, if it were not also the fact that the aortic systole is the force which fills the nutrient vessels of the heart itself. The coronary arteries, seated at the base of the aortic column, are filled by the backward flow of the blood on the aortic recoil arrested by the semilunar valves. When, then, the aorta loses its elasticity, and the recoil is lessened, this loss of arrest in the backward flow of the blood leads to imperfect filling of the coronary vessels, and the nutrition of the heart-walls is impaired. Consequently, the hypertrophy of aortic regurgitation, though the most massive, is the least durable of all conditions of hypertrophy. Mauriac has pointed out the why and wherefore of this fleeting hypertrophy; and Balthazar Foster has given a still more brilliant illustration of the subject by showing that, when an aortic valve is ruptured by violence, the duration of the consecutive hypertrophy depends largely on which of the valves is affected. If the torn valve have a coronary orifice behind it, the compensatory hypertrophy is brief, and the downward progress of the case swift; but, if the valves behind which the coronary arteries spring are the uninjured ones,

the complete valves arrest to some extent the backward flow, and so the integrity of the muscular walls is maintained and the hypertrophy is more lasting. (*Clinical Medicine, and Medical Times and Gazette, December, 1873.*)

When the hypertrophy is being cut down by molecular decay, the consequence of impaired tissue nutrition, the ventricle falters and its contractions are wanting in vigour, the arteries are insufficiently filled, and the coronary flow is still further diminished, leading to still further mural decay. The muscular structure is being undermined, and the ventricle yields once more to the dilating forces of the incoming currents, and not rarely hesitates. The system is insufficiently supplied with blood, and the case progresses rapidly on its downward career. Under these circumstances, the administration of digitalis gives relief, and its use is not only permissible, but beneficial. By exciting more perfect contraction in the faltering ventricle a fuller and better circulation is secured, and the case is tided on for a while. But that is all. When there is also intermittency in the heart's action, and there is a long diastole, during which the dilating forces are in action and the ventricle is almost paralyzed by its long halt, then the administration of digitalis is very beneficial. It not only excites more powerful ventricular contraction, but it does away with the long diastolic halt, and with it the tendency to ventricular paresis. This I have seen in several instances, and notably in a case quoted by my friend Dr. Clifford Allbutt in his well known essay on the *Effects of Overwork and Strain on the Heart and Great Blood-vessels*. Here there was the common double aortic disease, where the regurgitation was marked, and at times the ventricle halted over as many as four beats. The man was already confined to bed, but the rest alone was insufficient to inaugurate improvement. Digitalis and steel soon made a marked difference: the man was up and about in a short time, and got so well that once more he went down the coal-pit to work; it must be said with the most disastrous consequences, for in a few days he was dead.

In advanced aortic regurgitation, digitalis may be given to delay the inevitable end, but more cannot fairly be expected from it. Its use

in mixed or double aortic disease must be determined by the nature and indications of each case, and especially by the condition of the ventricular walls. When the ventricle falters, digitalis may be safely resorted to; till then it is better withheld. We may sum up as follows.

1. Digitalis is useful in aortic stenosis. By exciting a more powerful ventricular contraction, it enables an equal bulk of blood to be driven through a narrowed orifice in an equal time, thus establishing a new equilibrium.

2. In the earlier stages of aortic regurgitation, with massive hypertrophy, it is harmful rather than useful.

3. In the later stages of aortic regurgitation, where the heart failing from mural decay, and especially when intermitting, digitalis may be given with at least temporary advantage.—*Brit. Med. Journal.*

SOME AFFECTIONS OF THE NERVOUS SYSTEM DEPENDENT UPON A GOUTY HABIT.*

BY J. RUSSELL REYNOLDS, M.D., F.R.S.

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The dependence of "nervous derangement" upon a "gouty habit" has long been known; but I do not think that the frequency of such association has been fully recognized; and my object in writing this paper is to recall attention to the subject, and to point out, so far as I am able, the characters of disturbances in the "nervous" functions which would lead to a diagnosis or suspicion of a "gouty" diathesis.

First, let me say a word or two as to both "gout" and "gouty habit." The former means a "special" change, of inflammatory sort, in the tissues of the joints, accompanied by the deposit in those tissues of urate of soda. The latter, the "gouty habit," means the underlying cause of those special symptoms in the joints, a something which may express itself also in various organs and in diverse ways.

We do not know what is the starting point or essential fact of "gouty habit," but this we may remember, that between the simply chemi-

cal process of food-digestion in the stomach, and the ultimate making up, and breaking down, and carrying away of the waste, of tissues—they in brain, or nerve, or heart—there comes in the process of "assimilation"—or "concoction of the juices," as our forefathers called it—and also the conveyance of "excretory" material to excreting organs, and that these involve an infinity of changes in the quality of blood. This blood, which comes from food and goes to tissue, which comes from tissue and goes to excreting organs, may be healthy and lead to the formation of healthy tissue and the performance of healthy function; or it may be so deranged as to pervert the "nutrition" of certain tissues by a specific inflammatory process—"gout"; or it may disturb the "functions" of other organs by the impression which it makes upon them—"gouty habit." In other words, the "gouty habit" is a "toxæmia," chronic in its duration and multiform in its phases—a "blood-poisoning" induced *within* the system, and so far forth differing from the toxæmiæ with which we are so familiar, but which are introduced from *without*. That which has led me to believe that many so-called "nervous affections" are due to this "gouty habit" may be thus summarised. 1. The actual presence of gout in the joints of the individual at the time or at previous times. 2. The evidence of "gout" in ancestors or collateral relatives. 3. The frequent occurrence of acid eructations with chronic dyspepsia. 4. The emission of pale, limpid, acid urine, of low specific gravity, and with traces of albumen or sugar, or both. 5. The variability of symptoms, both as to kind and place. 6. The presence of some alterations in skin-nutrition, such as eczema and psoriasis. 7. The impossibility of referring the symptoms to any known disease of brain or spinal cord. 8. The immediate relief of such symptoms after treatment by colchicum and saline aperients, although simple purgation and treatment upon many other principles had failed.

In the endeavour to arrange this subject, there is great difficulty to be encountered; but I will adopt the method of describing "groups of symptoms" under five headings.

1. *Mental Disturbances.*—Many cases have come before me in which there was great restless-

* Read in the Section of Medicine at the Annual Meeting of the British Medical Association in Manchester, August, 1877.

ness; the patient could not be still for a moment; was alternately excited and depressed; slept badly, or not at all; was intensely hysterical; and could not attend to business; while others have complained of failing memory; of want of power of attention; of suicidal thoughts; of intense melancholy; others of sounds in the ears; voices, sometimes distinct, sometimes not; and some or all of these of long continuance; but yet all disappearing under treatment upon the hypothesis I have mentioned. These symptoms often alternate with, or accompany, those which I mention next.

II. *Pain in the Head.*—Some of the most intense head-pain that I have met with has been of this character, and been relieved by treatment of an anti-gouty description. The special features are pain on one side of the head, usually parietal or occipital; "grinding" habitually; but forced into almost intolerable severity by movement, such as the jar of carriage-riding, or running down the stairs of a house; and this without any oversensitive nerve-points; without tenderness of scalp; and without any aggravation by mental exertion. It is not affected by posture or by food; it is relieved by physical rest, and may disappear entirely after treatment of the kind that I have mentioned. It is not anæmic, nor neuralgic, nor dyspeptic (in the ordinary sense of that word), and it yields to nothing in the way of treatment that may be directed against those common varieties of headaches. It is very often associated with some of the other symptoms that I have mentioned, and they must be taken into account when making a diagnosis of the malady.

III. *Modified Sensations.*—1. Of these, vertigo is one of the most common, and it may exist alone. It takes sometimes the form of objective movement, but more frequently that of subjective movement, such as the sense of "swimming" or "floating" away. The vertiginous sensation is sometimes determined by posture, and occurs only when the patient lies on one side, it may be the left or the right; the apparent movement of external objects being from that side towards the other.

2. With vertigo is often associated "noise in the ears," not the sound of "voices," but drumming, hissing, singing sounds, recognized

to be in the ears, or in one ear, or in the head, and not appearing to come from outside. There is not, or need not be, any mental delusion with regard to these; the patient knowing well that they are inside his organism.

3. Associated with such vertigo and tinnitus there is frequently deafness, and the feeling of "beating in the ear"; and the symptoms are like those described by Menière; but I have found them in the vast majority of instances associated with a gouty habit. With vertigo and tinnitus there may be much mental depression, or attacks of bewilderment, amounting sometimes to those of *le petit mal*.

4. Modified sensations in the limbs may occur. A large number of people complain of "numbness," "tingling," "creeping," "deadness," or some other altered state of sensibility in the limbs, which, sometimes taking a paralytic, sometimes a hemiplegic, distribution, have caused much anxiety; and the more so, because the suggestion of organic disease of brain or spinal cord has sometimes been conveyed, and yet all these troubles pass away. That which I have observed to be in them the most characteristic of their gouty origin is their variability in kind and locality. To-day, for example, there is "coldness" in the left leg; to-morrow, "a sense of heat"; last week, a "pricking" in the right hand; the week before, a "stinging" feeling on the side of the head, or in the tongue. This wide distribution and variability, so alarming to the patient, is much less alarming to the physician, who recognizes in these very facts the elements for a favourable prognosis.

Here, too, I must mention the great frequency with which pains, flying pains, darting pains, often like those of ataxy, are met with in the limbs. So-called "sciatica" is of frequent occurrence, and "pleurodynia," and "myodynia" of all localities are common enough. The sciatica of gouty sort is often double, shifting from side to side with a frequency that does not improve the temper of the gouty patient, but may raise the hope of his physician as to the probability of cure. Other seats of pain are most frequently the insertion of the deltoid muscle and the inner aspect of the upper arm, the ankles, the heels, and the interscapular

region. The lower mammary region on the left side is often the seat of pain, as it, indeed, is in many other maladies.

IV. *Modifications of Muscular Action.*—1. Cardiac palpitation, intermittence or irregularity of pulse, or painful aortic pulsation at and below the epigastrium, often suggest to the patient the presence of cardiac disease; and it is worthy of remark that, on the one hand, a very great amount of discomfort may often be felt by the patient when the physician can discover no change in sound of heart or rythm of pulse; and that, on the other, disease of aortic valves, and other obvious signs of cardiac change, may often be discovered by the physician in a gouty patient, he having never been conscious of any thoracic trouble.

2. Flickering contractions of muscles in the limbs; tonic spasm, with cramp-like pain; and "startings" on falling asleep have often appeared to me to be of gouty origin, and that for the reasons that I have assigned. Priapism, without erotic feeling, is also very common. It sometimes disturbs the sleep, is felt on awaking, but quickly disappears without emission.

3. Local weakness of muscles, such as ptosis, single or double; want of co-ordination of movement of the limbs, both upper and lower, giving an awkwardness of movement and an ataxic gait—are among the symptoms that may have the course and history that I have suggested. I have recently seen several cases of ataxia, and one with marked double ptosis, which had been treated unsuccessfully upon a syphilitic hypothesis, but which recovered speedily when the treatment was based upon a gouty theory.

V. Lastly, there are symptoms beyond those which I have mentioned, and which do not form part of the matter for my description now, but which I will simply enumerate as being further guides or helps in the diagnosis of gouty cases: 1. Dyspepsia, cardialgia, distension of stomach and colon with flatus, pyrosis, and acid eructations; 2. Varicosity of veins, with tendency, upon slight injuries, to occlusion of veins; 3. Brittleness and vertical lining of the nails of both fingers and toes; 4. Slight conjunctivitis with occasional chemosis.

The groups of symptoms that I have enum-

erated rather than described sometimes coexist, sometimes alternate, and their phases are often very puzzling. They present great difficulties in diagnosis and in treatment until the clue is caught. It is often saddening to look through the carefully cherished prescriptions, and especially when they are one's own, and see the long array of drugs that have done no good—iodine, bromine, strychnine, quinine, zinc, iron, silver, cerium, arsenic, valerian, and hops, to say nothing of mercury, bitter infusions, mineral acids, and the like; but then one's sorrow may often be turned into joy—and a joy in which the patient most heartily participates—when a simple treatment, such as I have suggested, is adopted, and all the troubles disappear with a rapidity that seems quite magical, and reminds one of that beautiful process of clearing a photographic picture by cyanide of potassium.

DIAGNOSIS, COURSE, AND TREATMENT OF CANCER OF THE STOMACH.

Professor Rüle, of Bonn, in the *Deutsche Medicinische Wochenschrift*, has a lengthy article on this subject which we should like to reprint entire did space permit. He says:

"The disturbances of gastric function are not prominent, or at least, characteristic. The feelings of weight, uneasiness, and gnawing are present in other diseases, and vomiting cannot decide the question. Goodsir's sarcinæ are present wherever the contents of the organ are long retained, and even 'coffee-grounds' vomiting is not peculiar to cancer. But these symptoms, especially the last, combined with increasing cachexia, narrow the range of possibilities and makes carcinoma very probable. Vomiting of blood, especially copious, is rare. Chronic recurrent ulcer may give rise to very marked thickening of the wall near the pylorus. Cancer and ulcer do not exclude each other."

Rüle has never seen cancer produce such copious hæmatemesis as occurs from the rupture or erosion of a large vessel in the epigastrium or its neighbourhood; and, apart from ulcer, knows only of cirrhosis of the liver, or perhaps rupture of a dilated vein in an over-distended stomach, as rarer causes of hæmatemesis.

A case of profuse hæmatemesis is cited

in which villous cancer was found *post-mortem*; and reference is made to purpura, scurvy, and epistaxis as occasionally being the cause of hæmatemesis.

"The presence or absence of enlarged lymphatic glands or swelling in the clavicular region is of little significance, as they are often absent in cancer, and present from other causes. The forty years traditionally supposed to be the necessary age, does not help in doubtful cases, as cancer has been shown to occur at twenty. On all these grounds the repeated appearance of 'coffee-grounds' vomit in an individual who shows signs of increasing cachexia and gastric derangement is of much significance. Yet when to these always doubtful signs we add the presence of a tumour in the epigastrium error is quite possible, even excusable, or perhaps not to be avoided. Putting aside the difficulties of ascertaining that a tumour in the epigastrium is really connected with the stomach, let us assume that a tumour thus defined has the peculiarities of that hard and nodular condition which we claim for cancer itself, yet the tumour may be only a thickening of the wall of the stomach, resulting from a chronic ulcer, and consisting of inflammatory fibroid growth. Further on I will relate just such a case. On the other hand, a smooth, painless tumour of the stomach-wall may be a cancer. A non-characteristic tumour may be cancer, while, on the other hand, a hard nodulated painful tumour may not be cancerous at all."

A case is then related in which there was pain, vomiting, anæmia, emaciation, pallor, and debility, with an uneven hard, tender, tumour in the epigastrium of a man aged 44. Under treatment he improved for a time, the tumour not increasing in size; but, finally, he was attacked with hæmatemesis recurring in twenty-four hours, and very quickly followed by death.

"During life the unchanged condition of the tumour had shaken the diagnosis of carcinoma. The history did not permit us to accept the diagnosis of ulcer. That must have existed long previously. The tumour then could only be the result of an old long-standing chronic inflammatory process, and blood had never been vomited. Finally, death followed the erosion

of an artery and hæmorrhage into the cavity of the stomach. Dissection showed a large, almost healed loss of substance, with fibroid induration of the wall of the stomach over a considerable extent, and of remarkable thickness. The morbid process cannot be considered carcinomatous in the absence of cancerous elements and secondary carcinomatous affection. The nodular tumour of the stomach, felt during life, was not cancer.

"Whilst the history misled us, the observation of the unchangeability of the tumour corrected the mistake, and the fatal hæmatemesis which occurred confirmed the view that it was not cancer; and thus the verdict before death was in harmony with the verdict after dissection. That a tumour of the stomach may be regarded as a cancer, it is necessary to add, as this observation has shown, that its dimensions demonstrably increase. This addition has recently shown its value.

"A tumour may be so placed and conditioned that it appears not to be connected with the stomach, and so long as no stomach troubles are present, a diagnosis of the tumour as cancer, still less of cancer of the stomach, is hardly possible.

"A large strongly-built man, aged 43, presented himself. He showed no cachexia; his countenance was still ruddy. He complained of pressure in the left hypochondrium, and of frequent desire to pass urine. At the level of the left costal margin a smooth oval transversely lying tumour could be felt, eight centimetres long and five centimetres broad, which could be moved from right to left, and appeared little painful. Appetite was undisturbed; there was no nausea nor vomiting. From this account it seemed probable that the tumour was a dislocated organ—spleen or kidney. The next week the tumour was changed; it was more extensive. Later it became distinctly larger, rounder, and now began loss of appetite, vomiting, and debility. In the later stages coffee-grounds vomiting appeared, and the patient fell into a marasmic state. Dissection showed that an ulcerating medullary carcinoma of the greater curvature of the stomach, midway between the pylorus and the fundus: from the growth of the tumour, the cachexia,

and finally the coffee-grounds vomiting, there was sufficient evidence of carcinoma; but, at first, the diagnosis of the tumour was hardly to be made.

"In concluding these remarks on diagnosis, I may say that there are very rapidly growing cancers of the stomach which, from their consistence, are not to be felt in fat people, or when they are so placed that they are not accessible to the touch. . . .

"In the course of cancer of the stomach, rupture may occur. I saw a case of rupture into the peritoneal cavity, with so rapid a fatal ending, that peritonitis did not come on. The patient, who had been long affected, and whose cancer was easily recognizable, complained suddenly of a severe stomach-ache and collapse, after twelve hours of pulseless exhaustion. The contents of the stomach, gray, slimy, with remains of food in it, ran into the abdominal cavity. The stomach showed a very extensive carcinoma, which reached from the posterior wall to the pancreas, and near it was found a long sharp rent in the border of the tumour, the stomach itself being empty. At Griefswald I saw another case of a tumour near the abdominal wall, which gradually ulcerated through, and discharged the contents of the stomach for eight days during life; one could pass a probe a long way into the cavity; there was a cancerous gastric fistula."

A case is here recorded in which there was, undoubtedly, cancer of the pylorus with great dilatation of the stomach, the greater curvature reaching to the symphysis pubis, with scanty urine and symptoms of collapse threatening an early fatal issue, in which considerable relief followed the use of the stomach-pump occasionally, and the ingestion of a large quantity of water. The tumour even increased in size, though the patient was able to leave her bed, and death took place five and a-half months after.

Prof. Rüle speaks somewhat favourably of the palliative influence of condurango in relieving anorexia, vomiting, and pain.—*London Medical Record.*

A case of arsenical poisoning successfully treated with dialysed iron, is reported by Dr. Thomas B. Reid, of Philadelphia.

THE PATHOLOGY OF GRANULAR KIDNEY.

In the September and October numbers of Virchow's *Archiv*, Dr. Richard Thoma of Heidelberg has communicated a series of observations upon the changes in the circulatory apparatus of granular or contracted kidneys, which are very welcome in the present state of the question. His first experiments were directed to ascertain the relative permeability, under constant pressure, of the renal vessels in this disease, as estimated from the outflow from the renal vein, comparing this with the same as observed in healthy organs, the comparison being made under equal conditions of age. The result is to show that not only is the actual quantity which can be passed through the organ in a given time reduced very largely, as the smaller size of the organ might make us expect, but the proportion of the amount passing out by the renal vein to that introduced by the renal artery is much less than in healthy organs. He asks, is this due to the compression on the vessels by the new growth, or is it to be explained by a greater outflow through the walls of the vessels into the tubules? His next observations were to make very careful estimations of the weight of the kidneys at each period of life, and to measure with great accuracy the sectional area of the renal artery; and, having established the mean weight of the kidney to be 150 *grammes*, he calculated out a table of its variations for the different periods of life, corresponding to the variations in weight at those periods. He also carefully measured the sectional areas of the interlobular arteries midway between the cones and the capsule, and again near the capsule, of the vasa afferentia, and of the glomerulus itself; and he gives a table of these at different ages, from birth to forty-three years. He also estimated the areas of the interlobular vessels, and constructed a table showing their relation to the size of the individual lobules and the total weight of the organ; and from these data, taking the mean weight of a lobule to be ten cubic *millimètres*, he calculated the mean sectional area of the interlobular arteries for the first four decennial periods of life. He also calculated the volume of fluid which can pass through the kidney in a given time at different

ages from three to twenty-seven years, showing that it increases with growth of the organ. He then examined granular kidneys and determined all these points, still taking account of differences in age, with the following results. The sectional area of the renal artery in granular kidney is very slightly smaller than in healthy subjects of the same age, but relatively to the weight of the organ it is from a fifth larger to twice as large. The interlobular arteries in both places, the vasa afferentia, and the glomeruli, are all absolutely larger. By another series of experiments, he found that the rapidity of the flow of fluid in the renal artery of granular kidneys was not half, often not a fourth, of what it is in the renal artery of a healthy kidney. He also shows, by a very large number of observations, that the transverse section of the renal artery grows wider as the organ undergoes development, and proportionately to the weight of the kidney; and, further, that the peripheral resistance to the entering fluid grows relatively less, so that a greater quantity of blood passes in a given time through the organ.

By careful comparison of the effects of coloured injections on sound and on granular kidneys, he found that the latter permitted fluid to pass through the walls of the blood-vessels with much greater ease; and not fluid only, but gelatine, Prussian blue, chloride of sodium, and even solid grains of cinnabar, and this without rupture of the coats of the vessels; this happened, not on those parts which showed most connective-tissue growth, but in the vessels still otherwise apparently healthy. Careful injections proved, too, that the capillary network in granular kidneys was very scanty, and that, in many cases, the vasa afferentia anastomosed directly with the efferent vessels, being cut off from the glomerulus by the growth of fibrous tissue. On the changes in the walls of the vessels, he remarks that as a rule, in spite of the fibroid growth of the intima, the lumina of the vessels are not smaller than normal; only exceptionally, when the endarteritis has reached a high grade, does this take place. He regards these changes as connected with those endarterial processes—described by Köster, Friedländer, Trompeter, and others—as taking place in

almost all new formations of connective tissue, as they bear a distinct relation to the amount of interstitial growth. These facts are especially opposed to Gull and Sutton's theory that the narrowing of the lumina of the vessels by the new growth causes the obstruction to the circulation; they agree with independent observations that, as a rule, the vessels in granular kidneys are certainly not of less calibre than normal; they prove that the anatomical condition of the organ itself, independent of any vital changes, such as arterial contraction, causes a great increase in the resistance to the circulation through it; they explain the clinical phenomena of polyuria and albuminuria by the increased permeability of the vascular walls. We should very much like to see similar investigations on the state of the vessels in other organs, and especially the skin, in this disease, to determine whether a similar diminution of the capillary area is present. General capillary anæmia is undoubtedly a marked feature of even the early stages of this disease, and it is at least possible that the same cause, acting generally, may produce, although to a less extent, an universal reduction of the capillary network.—*Brit. Med. Journal.*

TREATMENT OF DYSENTERY BY INJECTION OF NITRATE OF SILVER. Dr. H. C. Wood, in the *Philadelphia Medical Times*, reports several cases of dysentery cured by injecting nitrate of silver. He uses from forty to sixty grains dissolved in three pints of water, and advises common salt to be injected if the nitrate does not come away in from ten to fifteen minutes. No change in the diet at the time of the injections was made, and no medicine, save a little opium, was given. Some of the cases had been treated for from one to seven weeks with other remedies without relief. Two to four injections were in some cases sufficient.

TREATMENT OF CARBUNCLE.—Dr. C. B. Leiter, in a paper read before the Georgia Medical Association, advocates exhausting the matter from carbuncles by the use of cupping glasses, dressing the wound with carbolic acid in the intervals of application. After the first application great relief ensues.

ACUTE RHEUMATISM : HYPERPYREXIA : RECOVERY.

BY T. CLIFFORD ALLBUTT, M. A., M. D.,
Physician to the General Infirmary, Leeds.

Mr. W., aged about 25, was attacked in August last with acute rheumatism. The disease pursued a favourable course, without heart complication. Salicylate of soda was administered on Friday, August 10th. During apparent improvement, the perspiration suddenly ceased: a phenomenon which caused some anxiety to his medical attendant, Mr. Oxley, of Pontefract. On Saturday, Mr. Oxley was still more uneasy on finding that all pain had entirely vanished, the limbs being thrown easily about in bed. The temperature also was found to be two degrees higher than the day before. Salicylate of soda was recommended in considerable and frequent doses; but the temperature continued to rise all that day and during Sunday. On Sunday night, there was much delirium; and early on Monday morning a message was despatched to me. On my arrival at about 9.30 A.M., the patient was lying on his back; his face was deeply flushed; and he tossed his head uneasily from side to side in delirium, or sank into stupor. The delirium and stupor alternated every few minutes. The temperature was now found to be about 107 deg., and was increasing every hour. Unconsciousness was complete, or nearly so. The pulse was very rapid, and the respirations also, though no accurate note of these symptoms was preserved. There was no visible swelling or redness of any part.

It was at once decided to place the patient in a cold bath. Unfortunately, the house, a large country residence, had been built before bath-rooms were in fashion, and a row of morning tubs could only be offered. Pontefract was some miles away, and time was pressing. An express was sent off for a full length bath, and meanwhile an active housemaid discovered an old-fashioned slipper-bath, or rather boot-bath, in a garret. This was brought to the bedside, and a row of servants was placed upon the staircase to pass pails of hot and cold water. The bath was filled with water at 80 deg.; and the patient, a heavy man, was lifted from bed and his legs with difficulty thrust into the foot of the boot,

so that he rested in a sitting posture upon a shelf within the heel. The rim of the bath reached the patient's waist. Regardless of floors and ceilings, very cold water was now poured upon the patient's head, who was held up in the bath, and whose temperature was now exceeding 107 deg. The difficulties of bathing and attention to the temperature of the water diverted the skilled observers from the patient, except so far as observation of the pulse was concerned. In five or six minutes, however, it was seen that he was quite conscious, and he had repeatedly expressed the intense relief afforded to him by the bath. In ten minutes, he was joking with his friends, and enjoying himself thoroughly. The water in the bath was so continuously heated by the body of the patient, that it was with difficulty lowered to 70 deg. and to 60 deg. by constant bailing out. With the recovery of the patient's consciousness, the use of the thermometer in the mouth became possible, and it was found that the upward movement of the temperature had been arrested. In this bath, cold affusions being poured continuously over the head and shoulders, the patient remained for forty-five minutes, when the thermometer had fallen slowly to 101.5 deg. He was still very comfortable and had no chill. He was now removed to bed, placed in a warm dry blanket, and a bottle put to his feet. His aspect and manner had for some time been perfectly natural, and his pulse and respirations were scarcely excessive. During the few hours which followed the bath, the temperature slowly fell to the normal. From this time forward, recovery was steady, and may have been aided by a few liberal doses of quinine, given with a view of preventing any renewal of the fever. It is but fair to add that the efforts of the medical men were admirably seconded by a nurse from the Bradford Institution, upon whom much necessarily devolved, and who carefully watched and recorded the temperatures throughout.—
British Med. Journal.

DEODORIZED IODOFORM.—Dissolve in ether and apply to the diseased parts. On evaporation an odorless coating of iodoform is left.—*L'Union Medicale.*

Surgery.

CUTANEOUS MANIFESTATIONS OF SCROFULA—GENERAL CHARACTER OF SCROFULIDES.

BY M. HARDY.

The word Scrofulide is a new term which was almost simultaneously employed by M. Bazin and myself to designate the affections of the skin dependent upon scrofula. But, whilst I reserve the name of scrofulides wholly for cutaneous lesions which have their point of departure in the scrofulous diathesis, M. Bazin ranges under this denomination certain manifestations of the skin which are also met with apart from scrofula, but on which this general disease impresses a peculiar character. (After a long argument addressed against this manner of classification by M. Bazin, Prof. Hardy goes on to say) The scrofulides, as I understand them, have only been veritably known in these latter days; they have only been thoroughly described by M. Bazin and by myself, in the lectures which we have delivered at the Hopital Saint Louis. They had previously been confounded with other ulcerations of the skin. In the middle ages, the majority of cutaneous diseases to which the name of lepra was given were certainly no other than scrofulides. Later, when Willan let in the light upon affections of the skin he confounded them with lupus, eczema, impetigo, &c. Besides, he misunderstood the nature of scrofulides, and that which he described in his order of dartrous diseases under the name of *ecthyomenes* is, in our point of view, merely the cutaneous manifestation of scrofula. To-day we are thoroughly versed in these diseases and freely recognize not only their general characters, but also their different varieties. From a general point of view, the scrofulides present peculiarities which distinguish them from other affections of the skin. In the first place, most frequently they give rise to no kind of pain; at the most they produce a slight sensation of pruritus or itching in the exanthematous scrofulide.

They may appear upon any region of the body, but their preferential site is the face, the neck, and the buttocks. They are, moreover,

remarkable for their perfectly defined circumscribed borders, and this character alone suffices to differentiate them from other eruptions and especially from the dartrous diseases. Their colouration also presents something special. It consists in a violet, vinous tint, which differs essentially from pure inflammatory redness, and from the yellowish-brown colouration of syphilis. Scrofulides are often accompanied by ulcerations, and these latter also have a peculiar diagnostic character. Their edges are, in fact, thin and undermined, and on raising them with a probe it is found that the extent of the sore is sensibly greater than would have been supposed from simple inspection. The base of these ulcerations is grayish, sanious, similar to the washed cuticle; sometimes, however, red and granulating. The secretion which it forms consists in a badly formed, serous, and rather abundant pus, which by desiccating gives rise to crusts. These latter too possess a special aspect. Whilst in syphilis they are of a pronounced green colour, very hard, and very adherent, the crusts of scrofula are, in general, rather soft, little resistant, and of an ill-defined colour: grey, clear yellow, or white. Sometimes, however, they are black, but this tint is simply due to an admixture with blood and pus. The skin over the regions occupied by scrofulides is in general the seat of considerable swelling. Thus it happens that you will very frequently find, beneath these eruptions, a swelling of the subcutaneous cellular tissue which notably exaggerates the size of the part on which the scrofulide is developed. On the surface the swellings sometimes present such characters that certain physicians, unskilled in skin diseases, deceived by this red, œdematous appearance, have described it as a special affection under the name of chronic erysipelas. But this is an egregious error, for erysipelas is an essentially acute disease, and one which cannot be mistaken. Dermatologists have given a special name to this form of scrofula, no matter what may have been the form of the elementary lesion—squamous, pustular, papular, or abscess—by which it may have first appeared. They have called it *lupus hypertrophicus*. One very remarkable thing is that this hypertrophy of subcutaneous cellular tissue, this œdema, this so marked tumefaction,

all give place, when the disease is passed, to a considerable atrophy: in such a region, the skin diminishes in thickness, it becomes retracted, and an altogether special phenomenon is seen to occur; in fact, when the scrofulide has been developed in the vicinity of the natural apertures, these latter become obliterated and are reduced to an almost imperceptible orifice. The mouth, for example, is puckered up and appears, according to the vulgar but true description, like the anus of a hen. The opening of the nasal fossæ or the external auditory canal may in the same manner be reduced to a simple foramen admitting with difficulty of the passage of a probe. This process of contraction, and of atrophy, is an important characteristic of the scrofulides.

Lastly, in scrofula, even when cure of the ulceration has been obtained, there still remains a something which enables us to recognize positively the nature of the disease, and that is the cicatrix. Be it known, in fact, that the scrofulides are always deep, that they almost constantly invade a more or less considerable portion of the dermis, and that when they have disappeared, even although there have been no loss of substance, they invariably leave behind them an indelible imprint; this character differentiates them from herpetic and dartrous affections like psoriasis or prurigo, after which the skin resumes its normal aspect. In scrofula, on the contrary, a cicatrix always exists, reticulated, uneven, and projecting, the thickness of which, moreover, is proportionate to the extent, and especially to the depth, of the ulceration. Some times very much sunken, very deep, but always uneven, it is in certain cases warty, reticulated, keloid-like, similar to those which deep burns leave behind them. This conformation of the cicatrices alone suffices, when it is met with in patients, to affirm that we have to do with a scrofulous individual, but most frequently the diagnosis is further aided by certain other concomitant phenomena. Thus we frequently observe in these persons either chronic otitis or ulcerations of the pharynx, besides cicatrices which point to ganglionic enlargements which have ended in suppuration, and lastly, we observe at other times, on the part of the articulations phenomena which are also proofs of the scrofulous diathesis. I shall say the same of the extremely long course of the disease, which rarely lasts less than one or two years, but which most frequently persists for ten, twenty, or thirty years, and sometimes even throughout the life of the individual.—*Hopital de la Charite.*

A SIMPLE METHOD OF REDUCING THE MORE FREQUENT FORMS OF DISLOCATION OF THE SHOULDER-JOINT.

BY W. S. OLIVER, M. D., SURGEON-MAJOR.

Reductions of dislocations of this joint, though generally easy to effect, are sometimes accompanied with such difficulty in its two most frequent varieties, viz., downwards and inwards and downwards, especially the former, as to need the administration of chloroform after extension, circumduction, etc., and all other methods of reduction have failed, and the patient has been subjected to much unnecessary suffering.

All this can be avoided, and the dislocation reduced in a few minutes without chloroform, and with little comparative pain to the patient, by simply seating him well back in a strong straight-backed chair, and gently lifting the affected arm upwards and backwards towards the spine of the scapula, and, until the humerus comes well in contact with the posterior part of the acromion process, no extension force being used more than is required to lift the weight of the arm.

This differs from a method over a century old (White's), in that the arm is not drawn vertically upwards, and extension and counter-extension have no act or part in the *modus operandi* of the operation, which is clearly explicable as follows.

1. The mere act of carrying the axis of the humerus in the direction specified paralyses, by relaxing and moving out of their line of action, all the most powerful of the muscles whose insertions are at some distance from the head of the bone, and are, therefore, engaged in retaining it in its false position. Also, it frees the neck of the bone from the constricting and retaining force exercised on it by the heads of the biceps and coraco-brachialis in the downward and forward displacements.

2. The humerus itself (chiefly through the intervention of its great tubercle) acting, first on the glenoid cavity, and next on the acromion process as fulcrum, lifts its head, either over the projecting lower edge of the glenoid cavity in the downwards dislocation; or, in the other instance, moves it around the point of the coracoid process and glenoid edge, and so enables it to be drawn instantly into its normal position by the powerful supra- and infra-spinati and teres minor muscles.—*British Medical Journal.*

TREATMENT OF DISSEVERED FINGERS WITH CARBOLIZED COLLODION.

Dr. Karl Franz, in the *Memorabilien*, says that he recently had a case in which a horse had bitten a coachman's finger, severing the third joint so that the portion of finger was barely hanging by the epidermis, one millimetre in width, and that he feared to touch it lest it should drop off. The wound was washed with cold water, and then carbolized water; the edges were brought in close apposition and thoroughly varnished over with a ten per cent. solution of carbolic acid in collodion. Afterward the entire finger was bound up in a pasteboard splint and cotton. The wound gave him no pain.

Twenty-four hours after this the end of the finger was examined. It was pale, and pricking with a pin was not felt. It remained in this condition twenty-four hours, and then I took off the bandage and washed the finger, and found that the parts had adhered very well. Upon pressure with a pin the end of the finger changed its colour from an already somewhat reddish to a pale hue, which, upon cessation of the pressure, again became reddened, as is observed in a healthy person. It was evident the circulation had been re-established, but sensation had only partially returned on the ninth day. By the twelfth day the finger was sensitive to the end of it, but motion was not yet possible. By the twenty-first day feeling had returned to all parts of the finger, and the man could use it a little, and strong pressure did not give him pain.

The length of time Dr. F. leaves the above dressing on is from four to eight days, if the patient remains satisfied.

Another case almost similar to the above is narrated, with a good result, in which the patient's little finger was cut off, with the exception of a shred of skin.

Also a case is reported where a miner had received a burn of the entire face, hands, and forearms, and both feet to the middle of the thighs. The burns were of the first and second degree. The carbolized collodion was tried on his face. The varnish caused the patient no pain at all. On the contrary, the evaporation

of the ether cooled the burning sensation. The swelling of the face, which in burns of a similar character occurs to so great an extent that the victim can scarcely be recognized, was here very insignificant, and only continued a short time. The painting was repeated once, and the face was left uncovered. Over the other burns I placed lint saturated with ol. oliv., with aq. calcis and a ten per cent. solution of acid carbol., the result being very good.—*Am. Practitioner.*

A NEW OPERATION FOR FRACTURE OF THE PATELLA.

—In a case of transverse fracture of the patella, Mr. Lister cut down on the fragments, opening the knee-joint, cleansed the surfaces of the fragments, and, having established an independent drain of horsehair for the knee-joint, drilled the two portions of the patella and tied the fragments together with silver wire, and then closed the wound, which was also drained with horsehair.

This operation was performed six weeks ago; the wound, as exposed to-day, was seen to be completely healed, the ends of the silver wire projecting through the scar. The highest temperature that had occurred was 100 deg. Fahr. on the morning after the operation. There has been no disturbance, constitutional or local, and both the wounds healed in about a fortnight.

The limb will be kept at rest for another fortnight, when, if union have taken place, the wires will be withdrawn.

REMOVAL OF TUMOUR FROM THE LARYNX.

—The patient was admitted suffering from a tumour of the size of a hazel-nut, apparently attached to the anterior part of the vocal cords.

A fortnight ago, Mr. Lister operated, dividing the cricoid cartilage and upper three rings of the trachea, and was thus enabled to see clearly the vocal cords from below, and found that they were both affected from end to end. After putting a tightly fitting tube into the trachea, to arrest hæmorrhage and enable the patient to breathe, he divided the thyroid cartilage in the median line, and clipped away the vocal cords, both true and false.

The wound is now for the most part healed, except at its lowest part, where a small communication with the trachea still exists; when this opening was closed, the man was able to cough and speak with a distinct but gruff voice.

LIGATURES FOR ARTERIES.

BY R. GARNER, F. R. C. S., STOKE-UPON-TRENT.

At several of our medical societies lately, tendon ligatures amongst other kinds have been alluded to; and, as it is probable that little is generally known respecting them, it may be excusable to give the following account.

The tendons of the stag, ox, or horse are available for procuring these ligatures; especial care, of course, being taken in the case of the last animal as to the cause of death. The best tendon for splitting easily and regularly is the flexor perforatus in its course below the heel (os calcis), giving, in the horse, ligatures more than a foot in length. They will be somewhat shorter if the ox-tendon be used; but, I think, finer ligatures may be obtained from this animal, the tendons of which are easily procured. A hundred ligatures may be got from one tendon.

The perforans tendon is long, and might be supposed well adapted for the purpose; but it is more compound in its formation, and, therefore, difficult to split. The tendon, before splitting, should be cleared of the surrounding cellular tissue, and the inner or front surface of the perforatus is best stripped off, as it is a cause of resistance in the splitting and of irregularity in the ligatures.

When split to the required thickness, the ligatures may be sorted and kept in proof spirit containing some carbolic acid. They are applied best in this moist state, simply rendered a little dryer by wiping; or they may be used dry, which they soon become when left exposed; they may also be twisted a little and stretched by pinning down at the ends. When they are used somewhat moist, but not too much so, as they are then slippery to handle, their advantages are: first, great strength; secondly, that a vessel may be tied with them in a knot as easy to form, and as little likely to slip, as with hemp or silk, the tendons being equally supple; and, thirdly, that they will, when cut close, certainly in a short time dissolve and disappear.

I have found that a medium sized ligature, placed on a suppurating surface, dissolves in seven or eight days; probably the knot requires a longer time. This may be thought too rapid a solution, but they have been applied, to my

knowledge in half a score of cases, and two or three times to the main arteries, and have never been followed by hæmorrhage or other bad effects. So much I may honestly say; but, whether they are worthy of further attention, or whether silk, or hemp, or catgut—any one of three—is all that operators can desire, I leave to be decided.—*British Medical Journal*.

ON THE REGENERATIVE PROPERTIES OF THE PERIOSTEUM AND ITS PRACTICAL APPLICATION.

—Von Langenbeck. (*Centralblatt für Chirurgie* No. 22.)—When the periosteum of a bone has been removed, to a considerable extent it will be replaced by new periosteum, without necrosis of the bone occurring. If this new periosteum is deprived of its bone, the bone will also be replaced. This has been proven by experiments of Bernhard Heine

Experience teaches Langenbeck that this reproduced periosteum possesses great vitality; and that for plastic operations the integument, that has become adherent to the bone, when removed with its periosteum, is of great value.

The author relates the history of two cases in which, through accident, the skulls were injured so that large openings were left in the cranial cavities. In these cases, L. used the integuments of the scars, with its periosteum, to cover and close the openings, and obtained the best results. He also related the case of a person who had lost a portion of the hard palate through syphilitic ulcerations. By using the tissue of the scars left, he succeeded in a partial restoration of the bone, while he had failed by using portions of the regular muco-periosteal lining or integument from unaffected portions of the mouth. Gangrene of these cicatricial flaps only occurred in anemic individuals that should have had a previous tonic treatment.—*Chicago Med. and Surg. Journal*.

An extraordinary meeting of the College of Physicians and Surgeons of the Province of Quebec was held in Quebec early in December, for the purpose of adopting an amendment which the Provincial Legislature will be asked to make in the Medical Act, compelling all Universities in this Province to give nine months' course of lectures in medicine.

Midwifery.

CHRONIC OVARITIS.

CLINICAL LECTURE, BY T. GAILLARD THOMAS, M.D.

Mrs. Josephine M., a native of Ireland, and twenty-nine years of age. She has been married six years, and has had one miscarriage (five years ago), but has never had a child at full term. This is a very striking case, and I would have you observe the history closely. She says that she has never been well since she has had the miscarriage, though previously enjoying excellent health, and that she suffers all the time from a severe pain in the left side, which runs down the limb as far as the knee. She also has pain in the back, leucorrhœa, and some dyspareunia, though this is not marked. Her menstrual periods occur regularly, but she suffers from the most intense pain for three days after the flow ceases. During the flow she has no unusual pain, and frequently feels better than at any other time; but before it comes on she has a feeling of nausea and of heaviness about the pelvis. About a year ago, while on a visit to Ireland, she consulted one of the most able gynecologists that I know of, either in Europe or America, Dr. Kidd, of Dublin, and he performed an operation for her.

The symptoms are perfectly clear in this case: the persistent pain in the left iliac fossa, and the peculiar dysmenorrhœa, which is not really dysmenorrhœa at all, and ought to have some other name. The one which Priestly has given such cases, viz., *intermediate dysmenorrhœa*, is not strictly correct, but it serves to describe the condition. In one case which came under my care this intermediate dysmenorrhœa occurred on the fourteenth day after menstruation, and so regular was its recurrence that the patient always went to bed early upon that day in anticipation of its approach. In another case it always came upon the ninth day. In both instances it was due to the same cause as the present case of post-menstrual pain. The operation which Dr. Kidd performed was incision and dilatation of the cervix, and if it had been a case of obstructive dysmenorrhœa (as he, no doubt, thought it was) it would certainly have been cured by the operation, for the cervical canal is

still widely dilated. Unfortunately, however, the patient has suffered just as much since as she did before it.

But I have not told you what is really the matter with our patient. On making an examination by conjoined manipulation, I found the uterus normal in size and position, and the cervix very much dilated, as I mentioned. On the right side of the organ I could detect nothing abnormal, but on the left side I distinctly felt the ovary, as large as an English walnut, and acutely sensitive to the touch. What is the matter with the patient? That ovary. She is suffering from chronic ovaritis, which has continued ever since she had the miscarriage five years ago. For some reason which I do not know, ovaritis is much more apt to follow an abortion than it is labour at full term. This is the condition of the ovary, and no operation, short of extirpation of the organ itself (which I do not recommend), will cure it. It is this which gives rise to all the neuralgia, the engorgement of the uterus and the leucorrhœa consequent upon it, the dyspareunia, the post-menstrual pain, and the nervousness of the patient, to which I have not before called your attention. It is always well at the end of a diagnosis to look back on the case and ask yourself the question whether it is really correct or not. As to the case before us, I know of nothing else than the condition spoken of which would produce just such symptoms. All the symptoms are fully accounted for on this supposition; and the evident presence of the enlarged and inflamed ovary, itself, leaves no room for doubt in the case. The feeling of nausea and undefined distress just before the menstrual flow, of which the patient complains, is entirely characteristic, and is due to the congestion of the ovary incident to the menstrual epoch. If the organ were in a healthy condition we should not be able to find it at all by conjoined manipulation; but it is so much enlarged that its presence is very plain, and so much distress is given the patient by pressure upon it, that I have no doubt that she could easily be thrown into hysterics by this means. By reflecting how uncomfortable one is made by a blow upon the testes, you can form some idea of her sensations when the unsound ovary is engorged with blood.

In a case like this never promise a cure, for in six months your patient may be no better than she was at the beginning of the treatment, and in that case she will be very apt to reflect rather severely upon you. I believe that Batty's operation has a brilliant future before it, but I would by no means think of resorting to it here, because the patient is not suffering nearly enough to justify us in adopting such an extreme measure. In another case which I have, however, I am thinking of trying it. Both ovaries are irremediably affected, and the patient is bed-ridden in consequence. I have already performed the operation once, and am quite willing to undertake it again. In this case I should advise that electricity be given a trial, and preferably in the form of the constant current, two or three times a week. One sponge electrode should be placed under the affected ovary, and the other on the abdomen above, and to the left of the symphysis pubis. In addition, whenever the patient feels the approach of a menstrual period she should immediately go to bed and remain there. As soon as the flow is over (the time when she suffers most), she should keep a large hot-water bag over the abdomen, and occasionally apply it to the spine also. I have not much confidence in medication in cases of this character; but there is one agent which I use a good deal, and which, in some instances, seems to act quite nicely, and that is the bromide of ammonium. She might take from ten to fifteen grains of this three times a day in some bitter infusion, before, during, and after the menstrual flow, and she ought also to keep her bowels somewhat relaxed at that time, so as to prevent the pressure of fecal matter in the rectum upon the ovary. She should abstain altogether from intercourse with her husband, and were she a patient in the higher walks of life I should recommend a change of air and the entertainments of travel. The latter means often proves of more service than any other in these cases.—*Med. and Surg. Reporter.*

Zoga reports a case of aneurismal varix between the left brachio-cephalic vein and the arch of the aorta, caused by an aneurism of the arch of the latter vessel adhering to the former.

SOME HINTS REGARDING UTERINE SUPPORTERS.

BY CLIFTON E. WING, M.D., BOSTON.

Dr. Wing is out again on the supporters, when used by competent hands. He writes pleasantly and well. Among other things, he says:

"The adjusting of a pessary which shall be worn for an indefinite time, until its objects have been attained, is not always a matter to be accomplished by once or twice seeing the patient, although some simpler cases require but little more attention, but often a process which must extend over weeks and perhaps months, and which requires the closest attention on the part of the operator to avoid injuring instead of benefiting the woman.

"That this fact is not appreciated by the profession at large is evident from the number of patients sent to the specialist, who come expecting to have a supporter applied, leave the office in a few minutes, and have no further trouble about the matter. Occasionally this can be done, but such cases are exceptions to the rule.

"When a uterus has been out of its proper position for a length of time, the tissues and parts about it accommodate themselves to the new position it has taken.

"We all know how easily a recent uncomplicated dislocation of the shoulder or hip-joint can be reduced by proper manipulation, and how difficult may be the process of reduction when the dislocation has become of long standing, and the surrounding tissues have become habituated, so to speak, to the malposition.

"It is exactly the same with a uterine displacement. When the womb has been but recently thrown out of position, it can often be easily replaced and retained where it belongs. When the displacement is of long standing, frequently the process of reduction is a very difficult matter. Hence the importance of early recognizing and treating these conditions. A complete replacement, in many instances which present, cannot be accomplished at once; the parts can only be carried back where they belong *gradually*. Oftentimes continued pressure must be used to do this, and must be kept up afterward to hold them in place until they

acquire, once more, the tendency to stay in the normal position.

"While with the surgery of the external parts of the body—as in a case of club-foot, for instance—for the gradual bringing into position of the tissues, appliances having screws, pulleys, and springs can be brought into use, and thus the steady pressure which is needed be readily applied and regulated, with a uterine displacement such appliances are impracticable, and we are obliged to depend upon the skill and ingenuity of the surgeon in applying pessaries of different sizes and shapes, to keep up the pressure which is needed, and at the same time avoid serious injury to the tender tissues.

"In many cases of displacement of the womb, the vagina, from being kept in an abnormal position, acquires a form very different from its normal one, and when the uterus is being carried back where it belongs the vagina, "*pari passu*," gradually regains its natural shape. So it follows that a pessary which will to-day fit the parts perfectly, and perform its duty of supporting the womb, will perhaps be found, on examination a fortnight, more or less, hence, to fail in keeping the womb up as it should, and now will not fit the vagina at all. Before the final pessary (the one which the patient can wear indefinitely) is reached, she may have to wear quite a number of different ones, each of which will do nicely for a time, and then be useless, or worse than useless; for a badly-fitting instrument is always likely to do harm. Thus, for the successful treatment of even a single case, the physician may need quite a full assortment of pessaries, and moreover, he must know from experience when and how to change them."—*Louisville Med. News*.

DEATHS FROM ANÆSTHETICS.—Four more deaths are reported from anæsthetics. In one case in which ether and nitrous oxide were used, death appears to have been caused by vomited matters entering the trachea. In a second case where ether was used, death rapidly followed vomiting. In the third case where chloroform was followed by ether, and in a fourth where ether alone was used, vomiting is not mentioned as having occurred.

Original Communications.

To the Corresponding Editor of the CANADIAN JOURNAL OF
MEDICAL SCIENCE.

CASES OF PUERPERAL CONVULSIONS.

BY JAMES ROSS, M.D., TORONTO.

DEAR SIR,—In your *Journal* for October, 1877, you have given a synopsis of my obstetrical record for the past twenty-five years, and have, with a few slight exceptions, given it very correctly; and, to render it more intelligible, I have thought that it would be well to make a few explanatory remarks about some of the most interesting cases, which may be instructive and useful to your younger readers. I shall begin with eclampsia, and endeavour to give a succinct account of the five cases there mentioned.

Eclampsia or puerperal convulsions is one of the most alarming complications of labour that the obstetrician can meet with, and is fraught with considerable danger to the parturient woman; but in the cases above referred to I was fortunate enough to save both mother and child. During the past month another very severe case has been under my care, with the same satisfactory result.

FIRST CASE.—I was sent for on the 23rd of March, 1857, to attend Mrs. L—— during her confinement. She was twenty-nine years of age, primipara, full term, residing three miles from the city, and had been in labour for nearly forty-eight hours when I arrived. She was strong and plethoric, and had no œdema of the extremities. The os uteri was considerably dilated, but presented a firm margin; the expulsive efforts were very active. The child presented occiput left anterior, and the bones of the head were well ossified. I had not been long at the bedside before I noticed a twitching of the muscles of the face, soon followed by a fearful convulsion. I immediately opened a vein in both arms, applied the forceps, and quickly delivered. She remained unconscious for some time, but did not show signs of permanent lesion of the brain; breathed easily, and swallowed water when put into her mouth. About twenty minutes after delivery she appeared restless, upon which I gave a teaspoonful of laudanum, and shortly after she fell into a

tranquil sleep. Convalescence was rapid; and since then she has become the mother of four or five children without any recurrence of convulsions.

SECOND CASE.—December 19th, 1859 Mrs. K——, aged twenty-two years, city, second labour, had been ill for thirty hours under the care of a midwife, and I was summoned after the convulsions had commenced. She was quite unconscious, and breathing with difficulty, but soon became quiet. She was œdematous, her labour had been strong, the os uteri was fully dilated, and the child's head—which presented occiput left anterior—was impacted in the pelvis. Consciousness returned, and she conversed with me, but felt exhausted. Countenance pale, pulse quick and soft, or compressible. Soon she was seized with a second fit, which lasted for ten minutes, followed for a short time by unconsciousness. At this juncture I applied the forceps and delivered, and then administered half a grain of morph. sulph. Before its effect had time to become manifest, she was seized with a third fit, seemingly more prolonged than the preceding one. At this stage my friend Dr. H. H. Wright, for whom I had sent, arrived, and we decided to give some revulsive and depletant. Accordingly four drops of croton oil were given. I saw her next morning; the convulsions had not returned, bowels had moved freely, and she was conscious. The next day I ordered her a few doses of pulv. jalap co., one to be taken occasionally, in order to remove the œdema.

She convalesced, and was able to nurse her child much better than I had anticipated. I attended her two years after with her next child. She was not œdematous, and did very well.

At this point I may be pardoned if I refer to the intolerable interference of a priest, called Father Rooney, who, either through ignorance or an authoritative presumption, entered the sick chamber of this woman when I was about to apply the forceps, and in a commanding voice ordered me to baptize the child *in utero* before it was destroyed by the instruments. This I promptly refused to do, as I have repeatedly done, and will always do. I did not know whether the child was living or dead, nor did I

take time to ascertain; my duty being, above all things, to save the mother if possible. This practice of baptizing a child before it has breathed, and before it has been brought into the world, is, I consider, a monstrous outrage, both upon the parturient woman and upon common sense.

THIRD CASE.—I was sent for on September 12th, 1869, to attend Mrs. L——, city, aged 22 years, primipara, full term. I saw her early in her labour. Her feet and legs were œdematous, the child presented occiput left anterior, the os dilated slowly, and the pains throughout were feeble. While waiting for nature to take her course, a convulsion came on. I immediately sent for the forceps—which I had neglected to take with me; but before they arrived a second fit occurred, the patient having become conscious in the interval. I immediately delivered her on the arrival of the instruments, and as soon as she was able to swallow I gave her morph. sulph. $\frac{1}{2}$ grain and potas. bromide \mathfrak{z} i She soon became calm, and fell into a tranquil sleep which lasted for several hours. The convulsions did not return, and she rapidly convalesced. I have attended her four or five times since without any trouble.

FOURTH CASE.—June 15th, 1875. Mrs. H——, aged 22, city, primipara, pale and œdematous, ill for six hours, presentation occiput left anterior, os considerably dilated, soft and patulous. The pains were active. I had not been long in attendance when she was seized with convulsions. Before I could apply the forceps she was seized with a second fit, and as soon as it had passed off I delivered. She was quite unconscious from the commencement of the first fit, and now appeared much exhausted. Shortly after delivery a third fit occurred. Dr. H. H. Wright, for whom I had sent, now arrived, and we gave her a third of a grain of morphia, hypodermically; but the fits recurred at short intervals until the total amounted to nine, the patient remaining unconscious throughout. Four hours after the first dose of morphia I gave her another, when she fell into a comfortable sleep which lasted for six or eight hours. She became conscious soon after, and was able to take nourishment. I ordered sulphate of magnesia, to be administered in purgative doses.

The bowels were moved, in due course, very freely, and convalescence was rapid. I attended her in her second labour which was quite natural.

FIFTH CASE.—This occurred August 12th, 1876, at Scarboro', twelve miles out of the city. Mrs. G——, aged 36 years, had had several children without any unusual trouble. She was œdematous, and had been confined, at 5 a.m., of a premature and dead child. Shortly after, she had a convulsion. Dr. Lapsley was called in, and remained with her all day. I saw her, in consultation with him, at 8 p.m. She had had nine or ten fits, having been unconscious for five hours, and now appeared to be very much prostrated. Her pulse was feeble, face pale, and her extremities were very much swollen. Shortly after I arrived she was again seized with a convulsion, from which I thought she could not rally, but after waiting for fifteen to twenty minutes I found her breathing—which was laboured—become more and more easy, and concluded that, as there was no evidence of permanent lesion of the brain, morphia would be most likely to afford relief. I suggested this treatment to Dr. L., and with his concurrence I put half a grain into the arm with the hypodermic needle. She soon fell into a calm sleep, and after the lapse of three hours without a fit having recurred, I left for home; directing, however, before my departure, that she must not be disturbed too soon, but be allowed, if she would, to slumber on for ten or twelve hours.

I visited her again three days after. She was conscious, but suffering from dyspnoea and cough, produced by œdema of the lungs. This was soon relieved by elevating the head of the bedstead ten or twelve inches, and acting freely upon the bowels. She subsequently made a good recovery.

Your modesty forbade the mention of another case which you attended, according to the entry in my record, while in charge of my practice during absence in the West. It was that of Mrs. Y——, city, and occurred in 1874. This case, also, terminated favourably to both mother and child. I have since attended the same patient, when her labour was quite natural.

Since the publishing of your tabulated ana-

lysis of my obstetrical record in October last, I have been called upon to attend another case. A Mrs. G——, who had been ill for about twenty-four hours before I saw her, was brought to child-bed for the first time on the 21st of October. She was a delicate woman, of a nervous temperament, and had, before my arrival, about 5 p.m., been put under the influence of chloroform by her two medical advisers, but without any practical result. Nine or ten severe fits had shaken her delicate frame; the last—from which she was just emerging upon my arrival—leaving her very weak. Unconsciousness had prevailed since the advent of the first fit. The os uteri was considerably dilated, and dilatable. The child presented occiput left anterior, and was low down in the pelvis. I administered a third of a grain of morphia, hypodermically, applied the forceps and delivered in about fifteen minutes. Sleep soon overtook her, and she remained quiet until midnight, when the convulsions suddenly returned, recurring at intervals until I again visited her at 9 a.m. next day. I again gave her a third of a grain of morphia, followed with the bromide of potassium in 3ss. doses as soon as she could swallow. I saw her in the evening, when she was still unconscious, but had been free from the fits since morning. She had taken ʒii of the bromide of potassium, combined with some milk. I ordered this to be continued. The following day I found her somewhat improved, though still unconscious. She had taken more nourishment, but struggled on about the same, between life and death, until the morning of the fourth day, when she became conscious. Her mental vigor was unimpaired; and when reason had resumed its throne she expressed surprise to hear that she had been confined; and it quite repaid me for the anxiety her illness had caused to witness her joy when she discovered that her first baby was alive and well.

Convalescence rapidly ensued, and she is now able to nurse her child.

Many other particulars of minor importance might have been noted, but I trust sufficient has been mentioned in this humble account to make these few cases interesting and instructive to the junior practitioners of our noble profession. And, in conclusion, I hope that I have not trespassed too largely upon your valuable and limited space.

CASE OF MORPHŒA NIGRA.

BY J. E. GRAHAM, M.D., TORONTO.

Katy B—, æt. 12, one of a family of nine all of whom are healthy, with this exception. There is no hereditary disease in the family. Her father, who is not a strong man, suffers from dyspepsia. She, herself, has always been healthy up to the appearance of the present disease, in fact, up to the middle of last week. The disease first made its appearance six years ago. It began as a small pimple on the lobe of the left ear, which became very red at times, and at times almost disappeared. From this point the disease extended very slowly until the whole of the lobe became involved. It is now completely covered by a somewhat slimy, dense integument of a yellowish-brown colour, and studded, especially at the edges, with yellow elevated spots, which appear to be enlarged sebaceous follicles. There appears to be neither elevation nor depression. There is a total want of sensation in the part. It may be pierced to a considerable extent by a needle without giving the slightest pain or sensation of any kind. There is a very slight erythematous halo around the spot.

In about a year after the ear became affected—a similar pimple made its appearance on the left cheek, from which the disease gradually extended, as in the ear. At the present time the spot on the cheek is almost as large as a twenty-five cent piece. It is circular, and is covered by a somewhat dense, slimy, dirty brown-coloured integument, also studded around the edges by yellow, elevated spots. The edges are somewhat elevated, and there is a slight depression in the centre. There is also here a slight erythematous halo in the centre. There exists the same want of sensation here as in the ear. The patient amuses herself by showing others how she can stick pins into it without hurting herself.

Both spots are increasing in size, more rapidly, her mother thinks, during the last six months than formerly. Her general health has been good up to last winter, when she had an attack of pneumonia, from which she quite recovered. For the last two or three weeks she has been in bad health; appetite, poor; and

complains of lassitude. The child, at present, is thin and anæmic; complains of cough. On examination of the chest found some localized rales at the right apex; no other evidence of disease. She has been under no particular form of treatment. I might say here that a year and a-half ago she came to the Hospital, when I examined the spots, but did not then make out accurately the form of disease. The spots were not so large at that time.

Treatment: Ol. Morrhuæ with Sy. Ferri Iodid. Gave also a simple expectorant mixture.

Dec. 28th, 1877.—Patient has been suffering from febrile symptoms somewhat resembling typhoid. She has complained of severe pains in the abdomen, generally worse at night. To-day Dr. Zimmerman and I made a thorough examination of the chest and abdomen, and came to the conclusion that there was consolidation over a limited extent at the right apex. There appeared to be some swelling of the abdomen, together with a good deal of tenderness. It is possible that there may be enlargement of the mesenteric glands.

Jan. 2nd, 1878.—Patient has improved somewhat in general health, but is still very weak.

I have taken the liberty thus to give a detailed description of this case, partly on account of its rarity, and partly on account of the intimate relation it bears to that loathsome disease—leprosy.

According to Erasmus Wilson, "Patches of morphœa nigra were present in all the cases of elephantiasis which have come under our observation, but we have not seen it independently of that disease; sometimes the patches are round, and not more than a quarter of an inch in diameter, at other times they may be as large as a crown piece or the palm of the hand, in one instance the body was spotted all over with them. The tint of colour in morphœa nigra presents some variety. It is sometimes a yellowish-brown, sometimes brown, and sometimes almost black." He considers morphœa to be a faint trace of a worn-out disease, as an ember of a burnt-out fire; that the disease, leprosy, which was of so horrible a nature in Great Britain during the middle ages, still exists in these isolated cases of morphœa.

Dr. Bulkley, on the other hand, looks upon it as an independent disease. He is of opinion that the connection between it and leprosy is not borne out by clinical cases.

Neumann classifies it with elephantiasis, and, I should judge, considers it to be a part of the disease.

I might say that in this case there are a number of reddish spots on the face which have made their appearance during the last few months, and similar in appearance, her mother says, to those from which the morphea spots originated. If the patient should live long enough it will be interesting to watch the further development of the disease.

As to the treatment of this disease, there has been no plan devised which has proved of much benefit. Like the true leprosy, which it so much resembles, it may be considered almost incurable. Cod-liver oil, potass. iodid., and arsenic, are the remedies which have been principally used.

Drs. Levy and Barduzzi lately published in the *Commentario Clinico di Pisa* an article on "Some little known therapeutic applications of the sulphate of copper." In the conclusion of that article they say: "We are, for the time being, content with having demonstrated that the sulphate of copper given to animals progressively from 0 gr. 05 to 1 gramme ($\frac{3}{4}$ grain to 15 grains) is easily tolerated, and that generally in this dose, far from occasioning any trouble, it greatly ameliorates the state of nutrition in these animals.

"That the sulphate of copper is a potent modifier of the nutritive functions by the increase of activity which it produces in the phenomena of nutritive exchange, and that, for this very reason, it is indicated in all conditions of the organism in which there are weakness, atony of nutrition, and impoverishment of the sanguinary mass; that, in these diseases, as also in the functional disturbances therefrom arising, medicine may derive from this remedy notable advantages, and results at least equal to those which may be obtained from other similar remedies.

"That the best and most simple means of administering the copper salt is to give it in pills at the commencement of or during a meal."—*Lyon Medical*.

Hospital Reports.

TORONTO GENERAL HOSPITAL.

MULTIPLE MELANOTIC SARCOMA OF THE SKIN.

UNDER THE CARE OF DR. AIKINS.

W. Chapman, age 64, native of Canada, married, father of a large family, farmer. Admitted to the Toronto General Hospital, Nov. 13th, 1877. Patient is of average height, thin, and shows signs of age. Has always been a healthy man; with this exception, about 25 years ago, suffered from rheumatism; thinks he may have had gonorrhœa at the time of latter disease; has also had pneumonia.

Some 25 years ago, through domestic trouble, took to hard drinking for about 6 months; has always been a great smoker.

Says his ancestry and children are healthy; no cancer in the family, except a cousin, who had cancer of breast.

About 30 years ago, first noticed under the integument a prominence of a black colour, the size of the head of a pin, about an inch to the left of the umbilicus; did not grow much till summer of 1876, when, during harvest, it became as large as a currant. Last fall, in consequence of being chafed whilst logging, it commenced to discharge blood and burst through the skin; tried burning with caustic, but without any good result, and it continued to increase in size. Last spring, it was strangulated by horse-hair, but afterwards, again commenced growing, uniting with three other adjoining tubercles, which appeared at this time, of a similar character, to form one large tumour on the surface of the body; present size (Nov. 20th), 4 in. long, 2 wide, and $1\frac{1}{2}$ thick, soft, and of the form of a cauliflower, without any discharge, but emitting a most offensive odour. At times, the patient experiences slight pain of a lancinating character from the tumour, but beyond this, and the uneasiness caused by the weight and liability to friction, it does not give much discomfort.

Six weeks ago, hard, colourless tubercles, some moveable, and others immoveable, varying in size from a pea to a cherry, formed under the integument all over the body, beginning on the

right thigh, possible number 200; those situated near superficial veins, of a pinkish colour, and some of these have burst through the skin. Patient does not think his general health has suffered, beyond experiencing gastric disturbances, caused by the offensive smell above mentioned.

Nov. 24th. The patient being placed under ether, Dr. Aikins removed the large tumour by means of the galvanic cautery, and he has since been progressing favourably without the aid of medicines.

Portions of the tumour have been submitted to microscopical examination, and found to possess the character of sarcoma, composed of round and spindle cells, in some parts, pigmented.

TUMOUR IN THE TRICEPS BRACHIALIS.

Mary G., æt. 18, farm servant. Robust and healthy all her life. When about 9 years of age, first noticed a smooth hard lump, the size of a pea, behind and above the right elbow. It caused no inconvenience or pain. Has been steadily growing ever since. About 12 months ago, began to pain her, both locally, and also running down along inside of arm, and on both sides of little, and inside of ring fingers. Gradually increased in intensity, till about beginning of Nov., 1877, had to give up work. Dr. Richardson, at the T. G. H., removed a hard, white ovoid tumour, about $1\frac{1}{2}$ in. in length, and $\frac{1}{2}$ in. in its greatest diameter, embedded in the substance of the triceps cubiti muscle, above the olecranon process of the ulnar, and behind the internal condyle of right arm, the ulnar nerve passing over it from without inwards. On opening the tumour, by a longitudinal incision, it was found to be fibrous, with several isolated nodules of osseous matter in its centre.

VENTRAL HERNIA.

Dec. 20th, 1877. Jas. O. B., while being examined as an out patient, in Toronto General Hospital, was found to possess a hernia about the size of a large hen's egg, $1\frac{1}{2}$ in. above and a little to the left side of the umbilicus. It could easily be reduced by taxis, applied directly backwards, but reappeared on pressure being removed. Occasions no pain or inconvenience. States, that in the year 1855, while manufacturing nitric acid, accidentally inhaled a small quantity of nitric oxide gas, which brought on violent fits of coughing, which lasted, on and off, for some days. During one of these, he felt something "give way," and the hernia appeared, which has lasted ever since.

Translations.

MEDICATION BY SALICYLATE OF SODA. DOSES TO BE PRESCRIBED IN ACUTE OR SUBACUTE ARTICULAR RHEUMATISM, GOUT, AND NEURALGIA.

Salicylate of Soda ought always to be preferred to salicylic acid, which was at first employed, and which presents the following inconveniences: it is not soluble in water, but only in alcohol and glycerine. It possesses an acrid taste, and irritant and caustic properties which are not devoid of danger to the mucous membrane of the alimentary tract. When salicylic acid is prescribed it should be dissolved by means of the bicarbonate of soda, the phosphate of soda, or Vichy water. The maximum doses of salicylic acid are 5 to 6 grammes (75-90 grains) per day; the quantity of bicarbonate of soda required to saturate a gramme (15 grains) of salicylic acid is about 1 gramme -11 ($16\frac{1}{2}$ grains). The salicylate of soda, on the other hand, is soluble in water in all proportions, and is free from all caustic taste.

The indispensable rules for its administration, or those which are of capital importance, are the following:

1st. *No therapeutic effect is obtained under 4 or 5 grammes (60-75 grains). This then is the minimum dose to be prescribed (per diem?) In acute maladies* it (salicylate of soda) may be pushed to 10 or 12 grammes in the day (150-180 grains).

2nd. This amount having been given it is important not to suddenly cease the employment of the remedy, but to diminish it gradually when the symptoms which called for its administration have disappeared.

3rd. The salicylate of soda should be dissolved in a rather large quantity of water (*e.g.* 300 gr. for every 30 gr.) and it should be taken in tablespoonfuls at equal intervals during the day. Moreover, each spoonful of the solution should be given in a glass of pure or alcoholized water.

4th. It is convenient, when this substance is to be given for a long period, to cause it to be taken at a meal (salicylate of soda, 6 to 10 grammes; water, 300 gr. To be taken by tablespoonfuls). (Some practitioners employ

the following formula : Salicylate of Soda, 6-10 grammes ; Syrup of Poppies, 150 grammes.)

Precautions to be taken.—In spite of its want of taste it sometimes happens that patients soon acquire a disgust for salicylate of soda ; it may even produce attacks of nausea which compromise the success of the remedy. This is why vehicles which may still further increase the repugnance of the patient should be avoided. We should always therefore preferentially administer the remedy in Vichy or Seltzer water, or direct a spoonful of brandy to be taken after swallowing the medicine (G. See). Other physicians have recourse to cherry-laurel water, (Herard) and to black currant which is much employed at *l'Hotel Dieu*, and which gives very good results. Lastly, the salicylate of soda may be given in Limousin's medicated wafers, but in this case it is necessary to take great care to drink a certain quantity of water along with it, or water slightly alcoholized.

(a.) *Salicylate of Soda in Acute Articular Rheumatism.*—The dose should be from 8 to 10 grammes (ʒii-ʒiiss) and sometimes 12 grammes (ʒiii) per day, continued up to the cessation of the pain and the joint effusion ; then it may be diminished each day for about 8 days. This is the only means of avoiding relapses.

(b.) *In Subacute Articular Rheumatism.*—The dose may be weaker, but never less than 5 to 6 grammes (75 to 90 grains). In this form of rheumatism it is necessary to take the greatest precautions to enable the medicine to be borne, as its use will have to be continued for some time.

(c.) *In Acute Gout.*—The dose is the same as in acute articular rheumatism. M. Germain See recommends this formula: salicylate of soda 30 grammes (450 grains), water, 300 grammes (ʒix-ʒiii), make a solution of which 4 tablespoonful are to be taken a day. After cessation of the pain, diminish dose by one tablespoonful ; continue the 3 tablespoonfuls for from 8 to 15 days, then reduce to two, &c.

(d.) *In Chronic Gout.*—M. G. See employs the same solution not exceeding 3 tablespoonfuls per day, until the engorgements have diminished and the pain has subsided, then reduces it to two tablespoonfuls per day for an indefinite time. *Relapses are thus almost certainly avoided.*

(e.) *In neuralgias and the lightning pains of ataxy* it is in comparatively reduced doses that we should commence the treatment, but they may be increased if the medicine do not make itself felt. Dr. Bouchard has seen very happy results from 10 grammes per day in ataxia.

In typhoid fever M. Gueneau de Mussy, seeking only for the antizymotic effects of the salicylate of soda, prescribes it in the dose of 2 to 3 grammes (30-45 grs.) dissolved in any drink that may be given. If, in this disease it be desired to use the salicylate of soda as an *antipyretic* it is necessary to give 8 to 10 grammes (ʒii to ʒiiss).

In diphtheria, salicylic acid has been employed in the dose of 10 centigrammes ($\frac{1}{2}$ grain) every two hours internally and as a gargle, associated with mulberry syrup.

In children, as a general rule the dose should be one-half of that for the adult.

Contra-indications.—The chief contra-indication for salicylic preparations is the pathological condition of the kidneys so frequent in gout. The practitioner should therefore invariably examine the urine before prescribing the remedy.

Lastly, in the great phlegmasiæ, such as pneumonia, we should fear depression of the vital forces and collapse. Pulmonary Phthisis is also a contra-indication to its employment.—*Paris Médical.*

M. Ferdinand Dreyfous has communicated to *La France Médicale* a most elaborate article upon the subject of "Belladonna Exanthems," whereof we append the conclusions:—
 "1st. Belladonna, taken in small doses, may give rise to eruptions. 2nd. These eruptions, always apyretic, have, in general, a greater resemblance to scarlatina than to any other exanthem ; but they may present secondary varieties, depending upon the region affected (the articular folds, for example), or upon individual circumstances (vapour bath or any other accidental cause superadded). Thus they may resemble erythema, or eczema, in certain points ; and so may or may not be accompanied by pruritus. 3rd. They appear suddenly, and disappear without treatment, as soon as the belladonna is suspended.

From *La France Médicale*.

SUPERACUTE PULMONARY TUBERCULOSIS.

BY M. DIEULAFOY.

A young girl eighteen years of age, fat and fresh, presenting all the appearances of health, entered my wards at the *Hôpital Temporaire* (St. Jean Ward) for some trifling indisposition; she complained of palpitation of the heart and pains in the left side of the chest, she experienced the sensation of a ball rising into the throat and choking her, she was not very regular, and her appetite was capricious; upon direct examination an intercostal neuralgia was found and a chloroanæmic bruit at the base of the heart, and in the large vessels; this was one of those mixed and ill-defined cases which partake at the same time of the characters of chlorosis and of hysteria, which are so frequent at this age.

For several days no new symptom made its appearance, then this young girl was seized, one Saturday after a bath, with shiverings and malaise which she attributed to a simple chill.

The next day, Sunday, same condition continued; but during Sunday night or Monday morning a violent oppression (dyspnœa) occurred, accompanied with cough; this oppression increased rapidly without allowing the patient a moment's rest.

The next morning, Monday, at the visiting-hour, we found the young girl in a state bordering upon asphyxia, the inspirations were short and rapid, the nails and lips were purple, the cough hard and jerky, the expectoration was catarrhal, the temperature reached 39 degrees (102.2 Fahr.) and the patient, affected with terrible anxiety, kept repeating that she was going to die.

What then did this very alarming condition, suddenly supervening in the midst of the appearances of health, portend? Clinical experience said asystolism, or perhaps obliteration of the pulmonary artery by thrombosis or embolism, but auscultation of the heart did not favour this view, and, besides, we had an elevation of temperature; fine diffused râles on both sides of the chest, accompanied by catarrhal expectoration and elevation of temperature, suggested the idea of a capillary bronchitis, but the

almost lightning course of this capillary bronchitis was very unusual; lastly, for several reasons, there was no ground for thinking it an attack of asthma.

The treatment employed was the following: A venesection of 300 grammes, forty dry cups to the lower extremities, two blisters upon the chest, and a sedative draught of ether and cherry-laurel water.

The patient died the following night.

At the autopsy we found both lungs congested, and riddled from top to bottom with tubercular granulations, the majority extremely small; moreover, an old cavity of the size of a small nut existed in the apex of the left lung.

This observation presents two chief points for consideration:

1. The extreme benignity of a pulmonary phthisis, doubtless of old date, having determined locally a cavity in the apex of the left lung, and having so slightly impressed the general condition, that this young girl had not complained of any of the symptoms of pulmonary tuberculosis, and presented herself to us in the freshness and embonpoint of health.

2. The almost lightning course of the acute deposit of tubercular granulations, having invaded the whole of the pulmonary parenchyma, and killed the patient by asphyxia.

Andral had observed such a case, since he says somewhere "that the rapid and simultaneous development of a large quantity of tubercle in the lungs has occasionally been announced only by a progressively increasing dyspnœa, by a sort of acute asthma," (Andral, t. iv. page 359.) Graves has also mentioned it, since he speaks of *acute tubercularis asphyxia*. (Graves, tome ii. page 127.)

From *L'Union Médicale*.

THE LIQUEFACTION OF OXYGEN.

At the *Académie des Sciences* on the 24th December, M. Raoul Pictet announced that on the 22nd of December at 8 o'clock in the evening he obtained the liquefaction of oxygen under a pressure of 320 atmosphere and at a temperature of 140 degrees below zero. There therefore now remain only hydrogen and nitrogen in the state of irreducible gases.

A NEW REVULSIVE.

BY DR. E. COUTIVIER.

Among ordinary remedies there are few which render so many services as revulsives. Sinapisms are of daily use; and flying blisters, although reserved for graver cases, have indications almost as numerous. But there are many circumstances in which the fugitive effect of a sinapism does not suffice, and in which we recoil from the employment of a blister. Our only other resources then are frictions with tartarated antimony or croton oil, and applications of thapsia. But these means present such serious inconveniences that we very often hesitate to recommend them. . . . I have said nothing of Burgundy pitch, because its effects are almost *nil*. What is required to fulfil all indications is an agent whose effect will be at once rapid and prolonged, and which will provoke a sharp revulsion without occasioning pain or itching. Does this agent exist? Yesterday it did not exist, or at least its properties were scarcely suspected and it was not employed; but it certainly will be so in the future. This agent is pimento, or rather the extract of pimento, which M. Lardy has just made known. It combines, in fact, in the highest degree, the various conditions we have just enumerated. It acts with great rapidity, ten to thirty minutes, according to the point of application and the delicacy of the skin. Its action is manifested at first by a sensation of heat, a slight smarting and redness. These go on increasing for about three hours, then they remain stationary, and the revulsive action is so continued as long as may be desired. Nevertheless, after twenty or twenty-four hours in the adult, eight to ten in children, it is better to remove the plaster, and put another alongside of it if it be desirable to continue the revulsion. The heat and tingling produced are painless and free from itching. . . . The extract of pimento has a beautiful red colour, identical with that of the dried fruit. Suitably incorporated in a plastic mass, and spread upon squares of paper, its application is very easy. It is unnecessary to warm it, for it adheres sufficiently to the skin; but it is well, on parts subject to movement, to fix it with a bandage just as a blister. Moreover, its action may be augmented or moderated according to the pressure. On removal, the heat and tingling may be immediately arrested by the application of a little starch.—*L'Union Médicale*.

From *L'Union Médicale*.

At the *Société de Chirurgie*, M. Guéniot read a second report relative to an observation of dystocia from vicious conformation of the pelvis, addressed by Dr. Cauvy (d'Apt.) It concerned a female assisted in her labour by a midwife who, in order to accelerate a very long labour, thought that she ought to administer a double dose of from $1\frac{1}{2}$ to 2 grammes of ergot of rye. In spite of the repeated employment of the ergot the head still remained at the superior strait. A physician was called, who made three futile applications of the forceps.

When M. Cauvy reached the patient, he found the uterus in true tetanic contraction. The head was wedged into the superior strait, and presented in the form of a soft tumour in which osseous fragments were felt, resulting from fracture of the cranium, probably produced by the repeated applications of the forceps. M. Cauvy seizing the hairy scalp with his hand, made tractions which sufficed to extricate the head and the rest of the body. But the patient, being exhausted, died twenty-four hours after her delivery.

This woman had already gone through two previous labours, the first with presentation of the breech terminated spontaneously; the second with shoulder presentation was happily terminated by version. M. Cauvy believes that he may draw from this conclusions favourable to the employment of version in preference to the application of the forceps in cases of dystocia from pelvic narrowing. M. Guéniot does not participate in this opinion, and thinks that the forceps ought to be generally preferred. In conclusion he calls attention to the serious abuse that midwives and even some physicians make of the ergot of rye in difficult labours, owing oftenest to vicious conformation of the pelvis. The ergot in these cases renders the accouchement infinitely more difficult and more fatal. We cannot too strongly set ourselves against this baneful practice. M. Lucas Championnière directed attention to the efficacy, in serious cases of dystocia with head presentation, of the employment of the cephalotribe, which, attacking the base of the cranium through the mouth, enables us to obtain an extreme reducibility of the head which singularly favours the termination of the labour.

From *L'Union Médicale*.

ON FORCED DILATATION OF THE SPHINCTER ANI.

Considered specially in its application to the treatment of hæmorrhoids.

BY F. MONOD.

We append the concluding remarks of the French reviewer of this inaugural thesis, Paris, 1877.

"Dilatation is not applicable to all cases without distinction. The author enumerates certain contra-indications; he insists upon hæmorrhage as the principal indication, and shows how the sufferer from hæmorrhoids who, from daily fluxes, has reached the last stage of hecticcy, may be immediately restored by a simple and harmless operation; lastly, he reports eleven cases which serve him as *pieces justificatives*. The last pages are devoted to a summary study of some other applications of forced dilatation. Among the conclusions which terminate this excellent work I shall limit myself to transcribing the following:

3rd. Hæmorrhoids, once established, produce, by reflex action, a more or less violent contraction of the sphincters of the anus, painful or otherwise, and most frequently permanent.

4th. This contraction playing a chief part in the subsequent development of internal hæmorrhoids, and in the production of those accidents which follow their prolapse (strangulation, hæmorrhages, irreducibility), forced dilatation of the sphincter is presented as the most rational means of cure.

5th. This rational treatment is found to be at the same time the most simple, and the most harmless, of all those that have been proposed; it can scarcely be called an operation.

6th. It is formally indicated in all cases in which there occurs an abundant sanguinary loss.

8th. In view of thirty cases, already known, in which the forced dilatation, without giving rise to any serious accident, has invariably produced, either a radical cure, or a notable amelioration, there is no temerity in assuming that this excellent method will rapidly pass into the domain of everyday surgery, and will one day become the most generally applicable treatment for hæmorrhoids.—*L. Gustave Richelot.*

From *Le Progrès Médical*.

DIAPYCNESIS OF LEUCOCYTES IN MAN.

In a short, but very interesting memoir, Dr. Collin, Professor at Val-de-Grâce, studies the migration of leucocytes in man. He shows us how pathological anatomy and clinical experience have confirmed the researches of experimental physiology. It has long been known that when fine coloured particles, of vermilion, for example, are injected into the vascular system of animals, the leucocytes take possession of them, bury them in their protoplasm, and circulate, carrying with them these bright red granulations. We can then follow their course, and nothing is easier than to establish their passage through the walls of the vessels, and their extravasation into the surrounding connective tissue. Referring to a fact which he had previously advanced before the Society, M. Collin confirmed his previous observations: in ague-poisoning, and in the melanæmia which is a consequence of it, there exist pigmentary deposits in the various tissues, especially those which are in most intimate contact with the blood, the walls of the vessels. The deposits arise from the red globules of the blood which are destroyed in the splenic pulp. The leucocytes seize hold of these granulations, as may be seen by a microscopic examination of the blood of persons suffering from the fever. Now these are white globules loaded with the debris of red corpuscles, which go to form the pigmentary deposits in the walls of the vessels and in the substance of the different tissues. According to M. Collin, this migration of globules loaded with pigmentary corpuscles is very active; and in countries where malaria abounds, there sometimes appears, after only two or three attacks of fever, the yellow, earthy tint, due to the general pigmentation of the tissues, consequent upon the diapycnesis of white globules charged with pigment granulations.

M. Collin has, at length, seen his view adopted by the majority of observers, and, since his communication to the *Académie des Sciences*, the works of Kelschs, of Cornil et Ranvier, and of Rouget have added the support of their authority to the demonstrations of the learned professor of Val-de-Grâce.

From *Gazette des Hopitaux.*

ON SUDDEN DEATH IN TYPHOID FEVER.

M. Dieulafoy is unwilling to accept either of the current theories as to the cause of sudden death in typhoid fever,—syncope from cerebral anæmia, or from fatty degeneration of the cardiac muscle. He propounds a view of his own "Relying, upon the one hand, on a number of observations where death occurred suddenly, apart from typhoid fever, under the influence of apparently trifling circumstances, such as the ingestion of ice water into the stomach, ammoniacal cauterization of the pharynx, &c.; and, upon the other hand, on the experiments of Brown-Sequard, of Goltz, and of Bernheim, which demonstrate the special excitability of the intestine and the mechanism of syncopes consecutive upon intestinal excitation, this author suggests that the syncope of typhoid fever is due to a reflex action having its point of departure in the diseased intestine. The excitation would be transmitted by the centripetal filaments of the great sympathetic to the cellules of the cord and medulla oblongata; at this point there would occur a transformation in the movement, which has followed, according to the case, somewhat different routes: sometimes the pneumogastric has been alone engaged and has given rise to syncopes which have been immediately mortal; sometimes the respiratory nerves have been at the same time involved, and have suddenly and precipitately determined the arrest of respiration and of the heart; lastly, in many cases other nerves of organic life have received a simultaneous excitation, a fact which explains the convulsions which have accompanied death.

From *Lo Sperimentale.*

CURE OF EPILEPSY.

In the opinion of Kunze we possess in curare a remedy by means of which we may cure cases of epilepsy of long standing. He employs a solution of 7 grains of curare in 75 minims of water to which he adds two drops of hydrochloric acid. At intervals of about a week he injects beneath the skin 8 drops of this solution, and in various cases in which convulsions had occurred for several years he obtained a complete cure after 8 or 10 injections.

CLINICAL NOTES ON NON-EMBOLIC INFARCTS OF THE LUNGS.

A very long article on this subject appears in the November number of the *Rivista Clinica di Bologna*, from the pen of Prof. Ercole Galvagni, the conclusions of which we here subjoin:

1. That pleuritic exudations, by the compression which they exercise; sometimes produce infarcts in the lungs, which, not being of embolic origin, must be distinguished from infarcts of this latter kind.

2. That the production of these infarcts is probably indicated at first by sanguinolent sputa (hæmorrhagic period), and later on by rusty-coloured sputa (reactive period of pneumonitis); phenomena which, in a rational way, seem to be present or wanting according to the greater or smaller number of their infarcts, their largeness or smallness, and the concomitance or not of bronchial catarrh.

3. That some of these infarcts may undergo the process of caseation, so that we have here a new explanation, perhaps not general, but at all events not to be overlooked, of the too frequent occurrence of pulmonary phthisis after pleuritic exudations.

4. That from this last consideration, chiefly, the precept is confirmed of practising thoracocentesis in due time, and with a suitable apparatus, either to prevent the formation of the infarcts, or to restore the lung, if they have already formed, as nearly as possible to the normal condition, which tends to facilitate the propitious process of involution of the same.

POMADE FOR PORRIGO, TINEA FAVOSA, ITCH AND PEDICULI.

Petroleum, 2 parts; axungia, 4 parts; essential oil of lavender, a sufficiency. Mix. For porrigo, this pomade is softened in a water bath, and spread by means of a soft brush upon the hairy scalp previously shaved. Before making a fresh application of the pomade the old one should be removed with hot water and black soap. This preparation may also be employed in tinea favosa, itch, and pediculi pubis, corporis et. capitis.—*L'Union Medicale.*

From *Rivista Clinica di Bologna*.

NITRITE OF AMYL.

We take the following from an account of the work of Dr. Jvan Ermesagem on Nitrite of Amyl, in the above journal. "The author divides into four classes the diseases in which the nitrite of amyl may be used: 1st. Syncope, coma characterized by weakness of cardiac innervation, anæmia, and the venous congestion of the cerebro-spinal centres. 2nd. Diseases characterized by vascular spasm. 3rd. Spasmodic affections of voluntary and involuntary muscles, diseases characterized by extreme elevation of temperature. The nitrite of amyl is chiefly administered by inhalation. Three drops on a handkerchief will avert threatening syncope from chloroform. In sea-sickness it will succeed heroically, according to the observation of Dr. Clapham (a hundred per cent). In hemiplegia, two drops will suffice to cure; but it is especially in angina pectoris and in asthma that the best results are obtained. But its employment is contraindicated in old people, or in those presenting any vascular or cardiac lesion. It is also contra-indicated in puerperal plethora. Its use at all times demands much circumspection."

From *Gazette des Hopitaux*.

PURPURA IODICA.

Dr. Tournier has observed a new variety of purpura which has hitherto escaped the observation of physicians. It is connected, as a pathogenic effect, with the ingestion of the iodide of potassium. . . . This eruption appears in the form of miliary cutaneous stains, of a purple, blood-red tint, not disappearing under pressure with the finger. It had, for its preferential site, the legs, in the anterior tibial region; and once the purpura occupied the trunk. The eruption gives rise to no local or general symptoms, and disappears after a lapse of time varying from two to three weeks. . . . As to the predisposing causes under the influence of which the iodic purpura is developed, they consist, not as might be supposed, in an impoverished, anæmic, debilitated state of the patients, or even in certain conditions of age, profession, external temperature, &c., but individual predisposition appears to be the only circumstance governing the ætiologic scene.

Formularies.

FROM FOTHERGILL'S HAND-BOOK OF TREATMENT.

One difficulty has always been felt, and it is this; even cod-liver oil is not always digested, and therefore something else was wanting. Dr. Balthazar Foster, of Birmingham, conceived the idea of utilizing Barnard's hint, and so combined ether with cod-liver oil. The increased flow of pancreatic juice so induced led to assimilation of the cod-liver oil, and thus another step forward was made in practical therapeutics. Another effect noticed by Dr. Foster was the return of a liking for fat under this plan of treatment, where previously a strong distaste to it had existed. One method is to give from ten to thirty drops of ether (sulphuric) in the dose of oil; or the ether may be given in water immediately before the oil. In private practice Dr. Foster prefers to give the following mixture:

Potassæ bicarb. ʒ jss, ʒ ij
 Acidi hydrocyan. dil. . . . M m. xij-xvj;
 Spt. ætheris. ʒ jss-ʒ iij;
 Aq. ad. ʒ viij. Misce.
 ʒ j ter in die sumat.

This method of adding to the usefulness of a course of cod-liver oil deserves wide and general attention.

Much difference of opinion exists as to the best forms of iron for common use. Some advocate iron in powder; others as haloid salts; while some prefer what are called the lighter preparations, as the ammonio-citrate and the potassium-tartrate. Personally, I prefer to commence in convalescence with the lighter preparations, and then go on to stronger forms. Much will depend on what it is desirable to combine with it. For instance,

Amm. carb. gr. v;
 Ferri. am. cit. gr. v;
 Inf. quassia. ʒ j

is a capital form in early convalescence, or in the treatment of amenorrhœa. After a time the following may be substituted for it with advantage:

Cit. fer. et quiniæ gr. v;
 Liq. strychniæ m. iv;
 Inf. calumbæ ʒ j

This forms a beautiful tonic, effective, agreeable, and pleasing to the eye.

A common form, much used in both public and private practice, is the following :

Quin. sulph..... gr. j ;
Tinct. fer. perchlor..... m. x ;
Ac. hydrochlor. dil..... m. iij ;
Inf. quassia..... ʒ j ;

Often the iron is felt to be heating, and then a little sulphate of magnesia is of service. The following is a typical prescription :

Quin. sulph..... gr. j ;
Mag. sulph..... ʒ j ;
Liq. fer persulph..... m. v ;
Ac. sulph. dil..... m. v ;
Inf. quassia..... ʒ j ;

If this lies cold on the stomach, a few drops of the tincture of capsicum may be added.

For a permanent prescription, requiring to be continued for months, a pill is the best form. It admits of a large supply of material in a small space ; the nausea of the disagreeable taste daily for months is also avoided ; it does not affect the teeth ; and it can be taken after food without attracting the attention of others, often so trying to persons in weak health. The following is a very favourite form with me :

Ac. arsenic..... gr. j ;
Fer. sulph. exsic..... ʒ j ;
Pulv. capsici..... ʒ j ;
Pil. al. et myrrh..... q. s.

In pil. lx, div. l semel aut bis in die

Taken immediately after a meal, this is a digestive and tonic pill of the highest value.

One beautiful preparation of iron should not be forgotten. It is often well borne when other forms are not tolerated, and consists of the recent addition of the tincture of iron to acetate of ammonia :

Tinct. fer. perchlor..... m. x ;
Liq. am. acet..... ʒ j.

It is beautiful to the eye, palatable, and, in consequence of the decomposition produced, readily assimilated.—*Louisville Med. News.*

THE PRESERVATION OF LEECHES.

Put them into water to which has been added thirty drops per litre (quart) of a 3 per cent. solution of salicylic acid.

AS PARASITICIDES IN RINGWORM OF THE SCALP.

Dr. Tilbury Fox recommends the following formula :—

Sulphate of Copper 20 grains.
Oil of Cade (ol. junip. pyrolig.) . . . 3 drachms.
Sulphur 3 drachms.
Ammonio-chloride of mercury 20 grains.
Lard 1 ounce.*

To be well mixed together.

Or, if the scalp be very irritable :

Oil of cade..... 3 drachms.
Sulphur 3 drachms.
Tincture of Iodine..... 3 drachms.
Carbolic acid..... 20-40 grains.
Lard 1 ounce.

Or this lotion which is cleaner than an unguent :

Perchloride of mercury..... 6 grains.
Tincture of Cantharides ½ ounce.
Strong nitric acid 1 drachm.
Distilled water to make..... 6 ounces.

The application of any of these must be thorough (preferably with a tooth brush) in order to produce slight suppuration of the follicles which contributes to the loosening of the diseased hairs at whose roots the fungus lies. The applications should be made night and morning. If non-irritating parasiticides be employed, Dr. Fox regards the simultaneous employment of epilation as a *sine qua non*.

A SYRUP FOR LUPUS (THIRY.)

Cod Liver Oil..... ʒ xij. ss.
Syrup of Bitter Orange Peel.... ʒ xij. ss.
Syrup of Quinine..... ʒ viij. ss.
Tannate of Iron..... grs. xv.
Essence of Anise and of Orange
Flowers q. s.

Make a mixture of which three tablespoonfuls are to be taken in the day by persons affected with lupus of the face. Repeated applications of the acid nitrate of mercury.—N. G.—*L'Union Medicale.*

FOR HERPES ZOSTER.

R Carbolic Acid..... m iv.
Gelatine ʒ iij.
Glycerine ʒ ii.
Aq ʒ ii.

Boil to a jelly.

CROTON-CHLORAL FOR CILIARY NEURALGIA.—Friedinger.—(*Wiener Med. Wochenschrift*, No. 31, 1877.) Croton-chloral seems to have an almost specific influence on the sensory fibres of the fifth nerve, and it can be more surely relied upon to allay those fearful pains, which attend the violent inflammations of the iris and choroid, and are known as ciliary neuralgia. In all cases in which it was given for this neuralgia, it has exerted its anæsthetising effect without producing any collateral disturbance. This is the formula:

R Croton-chloral hydrate - 1 gramme
Spir. vin. rectific. - - - - 4 “
Aq. destill. - - - - - 150 “
Syr. aurant. cort. - - - - 15 “ M.
1 tablespoonful every two hours.

IODIZED COD LIVER OIL.

R Cod Liver Oil 100 grammes.
Iodoform..... 0 grammes 25 centigrammes.
Essence of Anise 10 drops. M.

BOOK NOTICES.

A Case of Syphilitic Aphasia. By L. P. YANDELL, Jr., M. D. Reprinted from *Louisville News*.

Clinical Report on 3,873 eye patients treated at the New York Ophthalmic and Aural Institute during the year 1876. By Dr. ADOLPH ALT, M. C. P. & S., Ont., late Resident Assistant Surgeon. New York: Wm. Wood & Co., publishers, 27 Great Jones Street, 1877.

Contributions to the History of Medical Education, and Medical Institutions, in the United States, 1776-1876. Special Report prepared for the United States Bureau of Education. By N. S. DAVIS, A. M., M. D. Washington Government Printing Office, 1877.

APPOINTMENTS.

Dr. Alleyne Nicholson, Professor of Natural History in the University of St. Andrew's, has been appointed by the trustees of the British Museum to the Swiney Lectureship on Geology.

James W. Alway, of the Village of Grimsby, Esquire, M.D., to be an Associate Coroner in and for the County of Lincoln.

Miscellaneous.

OBITUARY.—Dr. E. R. Peaslee, of New York, died on January 21st.

VOMITING OF PREGNANCY.—Add thirty drops of tincture of iodine to 8 oz. of water, and given in tablespoonful doses every hour.—*Gaz. Med. di Roma*.

PICRATE OF AMMONIA, in grain doses, for the adult, is, according to Dr. J. W. Snider, of Fairland, Ill., speedily efficient in the treatment of intermittents.

USE OF CAPSICUM WITH QUINIA.—Prof. W. H. Thompson says that either capsicum, ginger, or other aromatics, combined with quinia, will diminish the amount required of the latter.

GRINDELIA ROBUSTA in ten drop doses of the tincture for a child two years of age, is claimed to be curative in cases of whooping cough, if repeated every two hours for three or four days.

LESIONS OF THE PANCREAS IN DIABETES.—The *Gazette des Hopitaux* states that recently M. Lancereaux laid before the *Académie de Médecine* some specimens, exhibiting extensive lesions of the pancreas in subjects of diabetes.

A CASE OF MALARIAL UNILATERAL HYPERIDROSIS (periodical), affecting the right upper extremity, is reported in the *St. Louis Clinical Record*, by Dr. O. V. Gaardner, of Serbin, Texas. Quinine was given, and recovery speedily followed.

MAXIMS OF SUCCESS.—1. Never look surprised at anything. 2. Before stating your opinion of a case, on your second visit ascertain whether your previous directions have been complied with. 3. Never ask the same question twice.—(*Dr. James Syme.*)

JOURNALISTIC.—Drs. W. S. Edgar and D. V. Dean have transferred the *St. Louis Medical and Surgical Journal* to Dr. Thos. F. Rumbold, who, as editor and proprietor, will, with Dr. Hiram Christopher as associate editor, in future conduct the journal.

OBITUARY.—Mr. J. F. Marson, who has for forty years been resident-surgeon at the Small Pox and Vaccination Hospital, Holloway, died last month. He had long been known as one of the highest authorities on the subject of vaccination and small-pox.

DEATH FROM A NEEDLE.—A case is reported in which a patient died from hæmorrhage from a punctured wound in the aorta caused by a sewing needle which had been swallowed. Part of the needle was embedded in the œsophagus.

At the Pathological Society of London, Dr. Pearson Irvine lately showed a specimen of an aneurism in the cavity of an abscess in the liver. Dr. Douglas Powell showed a specimen of a small aneurism on the wall of an ulcer of the stomach. During the Session a discussion will take place on the diseases of the lymphatic system; leukæmia and lymphadenoma will be specially considered. The first discussion will take place in March.

INCOMPATIBILITIES OF STRYCHNIA.—Bromides, iodides and chlorides of sodium or potassium produce a decided precipitation in solutions of strychnia. Dr. A. B. Lyons reports in the *Detroit Medical Journal* a case where serious poisoning was caused by the last dose of the following:—

R Strychnia gr. ii.
 Bromide of potassium ℥ii.
 Syrup, water aa ℥iv.

M.

THE MEDICO-LEGAL INVESTIGATION OF SPERMATOZOA.—“Certain vegetable fibrillæ, particularly those of hemp, contain in their interior, certain ovoid granulations, slightly flattened in their longest diameter, and very refractive, which precisely resemble, in dimensions, aspect and form, the so-called head of the anamalcule. These granules become free as soon as the cellulæ are destroyed, and are dispersed in the

liquid where the debris of the material is floating.”

Longuet accordingly has searched for a colouring matter which by its elective action would permit one to distinguish between the animalculæ and the vegetable detritus; and, after numerous essays, he succeeded with ammoniacal carmine, such as the histologists use. The spermatozooids behave differently in the presence of the carmine, according as they are fresh, or old and dry. When recent they are very slightly changed; when old, they fix the colour with great intensity, more particularly in the large extremity, the so-called “tail” remaining uncoloured. This singular property suffices for their immediate recognition, even when they are surrounded by foreign elements which affect analogous forms.

The author advises as follows:

1. Take a small square of the material, supposed to be stained with semen, cut as nearly as possible from the centre of the stain.
2. Plunge the little square of material into a small quantity of distilled water, coloured by a few drops of an ammoniacal solution of carmine (5 or 6 drops to 5 grammes of water).
3. Leave this to macerate for 36 or 48 hours, and even more, for no inconvenience will result.
4. Separate the threads of the material very carefully, thread by thread and fibre by fibre.
5. Isolate each separate fibre.
6. Examine each separately by the microscope, with an enlargement of 500 diameters, each morsel being placed in a drop of ordinary glycerine.

In a preparation thus made, clusters of spermatozooids will be seen for the most part entire, “the head” coloured a light red, “the tail,” without tint, disseminated among non-coloured vegetable fibrillæ of perfect refraction.

The advantage of this method lies in the fact that the results are most decisive according as the stain is old—that is, under the most unfavourable circumstances, for nothing is more easy than the isolation and recognition of spermatozooids in recent stains.—*Chicago Med. and Surg. Journal.*