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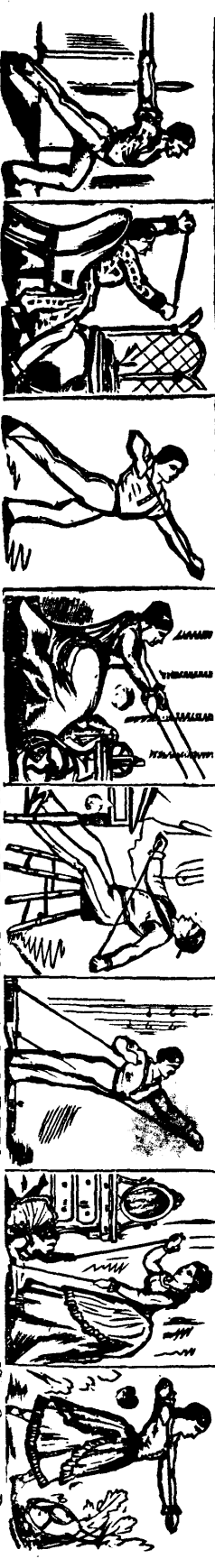
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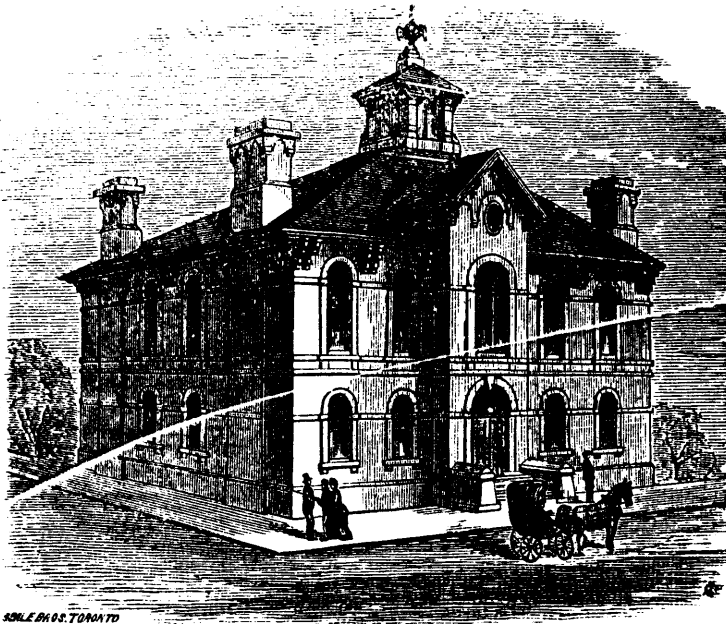


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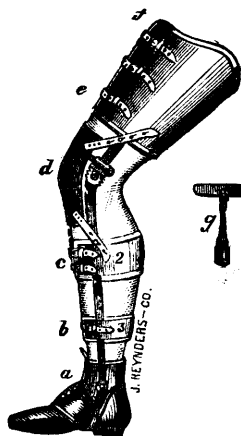
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**Selections: Medicine.**

**ATROPIA IN THE EXHAUSTING NIGHT-SWEATS OF PHTHISIS.**

In an interesting article on anhidrotics (agents which check profuse perspiration), Dr. J. Milner Fothergill (*Practitioner*, Dec., 1876) thus speaks of the value of atropia:—

I have no hesitation in saying that the use of this agent completely changes the aspect of many cases of pulmonary phthisis. For the arrest of the exhausting night perspirations of phthisis, belladonna is as potent as digitalis is in giving tone to a feeble heart. It is quite true that neither is very effective in the last and final stages of disease, for indeed nothing is very potent then; but in the early stages the action of each is very pronounced. In the night-sweats of spreading caseous pneumonia, the administration of belladonna is followed in almost all cases by a decided arrest of the flux; and, in many cases, the arrest of this flux is accompanied by immediate improvement. A few of the worst cases only go on entirely unaffected. In the colliquative sweats of the last stage, when the lung is breaking down extensively, the influence exercised is small; still, it usually palliates the drain to some extent even then. The loss of the salts of the body in profuse perspiration quickly exhausts the system; and the arrest of this drain commonly permits of the other measures being effective in improving the general condition. While the loss goes on unchecked, improvement is impossible.

To produce these effects it is necessary, however, to use larger doses than those spoken of

by Dr. Ringer. He speaks of from  $\frac{1}{200}$ th to  $\frac{1}{100}$ th of a grain of atropine given hypodermically; and of from  $\frac{1}{80}$ th to  $\frac{1}{40}$ th by the mouth. I have had no opportunity of trying the hypodermic method; but as to the dose given by the mouth, I usually commence with  $\frac{1}{75}$ th of a grain, and go up to  $\frac{1}{25}$ th; the latter dose rarely failing. I am inclined to think that in Mr. William Murrel's sixty cases referred to by Dr. Ringer the large proportion of failures (from 8 to 10 per cent.) was due, to some extent, to his not pushing the drug. When  $\frac{1}{75}$ th is ineffective, I prescribe  $\frac{1}{50}$ th; if, next week, that has failed,  $\frac{1}{25}$ th is ordered. This usually produces the desired effect, after which smaller doses will maintain it, and may be continued. For instance, in one case at Victoria Park Hospital, on July 22nd,  $\frac{1}{50}$ th was ordered; the patient at the same time taking a mixture of iron and strychnia, with  $\mathfrak{ij}$  of sulphate of magnesia three times a day. This did well for a week or two, when the night-sweats returned, so that on August 19th the dose was increased to  $\frac{1}{25}$ th. The effect of this was pronounced, and on the 26th it was reduced to  $\frac{1}{50}$ th again; and on September 9th to  $\frac{1}{75}$ th, which dose keeps the sweats down satisfactorily.

As to the number of cases I have kept no account; but, during the week, July 16th to the 25th, this year, an intensely hot week, 74 patients, out of a total of 300, were taking belladonna at bedtime at Victoria Park Hospital alone. At the West London Hospital I had at least 30 more during the same week. Thus I had 100 at one time under the influence of belladonna. Consequently my experience of the use of belladonna in the treatment of hidrosis is not a very limited one. It enables



me to say that belladonna or atropine may be freely used without apprehensions as to any toxic effects appearing. Even with  $\frac{1}{2}$  th of a grain of atropine every night, the patients do not complain much; some dryness of the throat and a little indistinctness of vision being all, while all prefer these to their dreaded sweats. These effects wear off in a day or two after the drug is discontinued, or even the dose reduced. I have not yet seen any alarming symptoms produced. This I attribute to the gradual increase of the dose; and I have little doubt that if  $\frac{1}{2}$  th were given at first, many cases would show marked toxic symptoms. But where there seems a tolerance of the drug, the dose must be increased; and may safely be increased. Belladonna is an agent which produces marked toxic symptoms long before a fatal dose is reached; much the same as is the case with strychnia. It is not a treacherous drug by any means, and may be used with confidence. Dr. Charles Kelly (*Practitioner*, March, 1873) found that, in the treatment of whooping-cough, half an ounce of the tincture in twenty-four hours could be safely taken by children of three or four years of age. Without advocating such large doses, until a further experience demonstrated their safe use, I may say that from  $\frac{1}{7}$  th to  $\frac{1}{2}$  th of a grain of atropine, and from 20 to 35 minims of the tincture of belladonna are quite safe doses. The atropine may be given in pill; while the tincture of belladonna is best combined with dilute phosphoric or sulphuric acid (*mxv*), and may be taken at bedtime or when the patient awakens, about two or three in the morning. It is my intention to try larger doses for the relief of the colliquative sweats of advanced phthisis. As to the actual facts of toxic symptoms of the seventy-four cases mentioned, one had dryness of the throat, a second had some derangement of the pupils, and a third some indistinctness of vision on getting out of bed in the morning, which quickly wore off.

If any doubts existed as to the casual associations betwixt the administration of the belladonna and the arrest of the hidrosis, they are dissipated by the fact that on omitting the medicine the perspirations returned—as when the patients neglect to attend the hospital, and

so are without their medicine. On again taking the medicine the sweats disappear. This puts the matter beyond doubt or cavil, especially when combined with Ringer's experiments, which are well worth perusal.

A few words now as to the practical use of belladonna in the treatment of phthisis. The most common cases are those where a slowly spreading caseous pneumonia involves one lung to the second, third, fourth, or fifth rib. There is a fast pulse, over 100, a temperature over 100° Fabr., cough, profuse night-sweats, and rapid wasting. It is in these cases that the utility of belladonna is so well seen. As soon as the profuse night-sweats are checked, the patient begins to pick up; the appetite returns; food is better assimilated; the sleep is refreshing; and the mind is much relieved. In fact the arrest of the drain of salts by the hidrosis at once inaugurates an improvement; and the good effects of the other measures resorted to are not lost, as before. It is well, at the same time, to give the patient tonics, iron with strychnine or quinine, together with mineral acids; good food in liberal supplies, and cod-liver oil if the stomach will carry it. The association of night-sweats with debility is notorious. Fuller recommends some alcohol to be taken at bedtime invariably. When the morning sleep is deep the sweats are most profuse, and are "to be in part avoided by keeping awake, which is often done purposely." (Marshall Hall.)

Finally, my experience of pulmonary phthisis is not depressing, but rather encouraging, especially in its early stages. It has been much more cheering since I have employed belladonna extensively. In some cases where the belladonna does not act as potently as usual, oxide of zinc with hyoscyamus is found to be effective. In those cases where the cough at night prevents sleep, opium may be given with belladonna. The belladonna prevents too great action on the sudoriparous glands, and the combination is very effective. To prevent too much action in the intestinal canal, it is well to give the neurotics in pill with aloes. A pill of morphia ( $\frac{1}{2}$  a grain), atropine,  $\frac{1}{3}$  th in three grains of pil. al. et myrrh., is used by me at Victoria Park, and acts satisfactorily. It is

not always an easy matter to avoid the undesirable effects of therapeutic agents; and when they must be resorted to, it becomes necessary to provide against and ward off these effects by suitable additions and combinations. There are no serious drawbacks to the use of belladonna, and the dry throat and indistinctness of vision are usually borne by the patients without complaint.

The arrest of the profuse and exhausting night-sweats is usually followed by more or less immediate improvement; and belladonna very rarely fails to achieve this arrest. The systematic use of anhidrotics must grow with further acquaintance with them, and especially with belladonna; and the public, as well as the profession, are under a deep debt to Dr. Ringer, which, I trust, this paper will do something towards demonstrating. Belladonna seems to be a specific anhidrotic, acting on the sudoriferous glands as it does on the submaxillary gland. Heidenhain (*Pflüger's Archiv.*, vol. v., p. 40,) indicates that belladonna may be found to affect other glands than the submaxillary by acting on their secreting nerves. Such seems to be its action in the arrest of hidrosis; which it effects when applied locally as well as when given by the mouth or injected hypodermically. —*American Journal of Medical Sciences.*

**THE NIGHT CRIES AND NIGHT STARTINGS OF CHILDREN.**—Caspari attributes them to frightful dreams. In children under a year old, and especially in delicate, anæmic children, they are associated with mild or severe convulsions. He uses as a specific, bromide of potassium, and according to the age gives 0.5 grmm. to 1.5 grmm. (gr.  $7\frac{1}{2}$  to gr.  $23\frac{1}{2}$ ) a day. (Gr. xxv. potas. brom., aq.  $\zeta$ iss— $\zeta$ i four times a day). According to Edlefsen's experience bromide of potassium always causes quiet and peaceful sleep in young children, but does not act so well in older ones. It acts well in convulsions, teething and meningitis. He gives a strong six months old child 0.5 grmm. ( $7\frac{1}{2}$  grains) three or four times in the day, or once or twice in the evening. Younger and less robust ones, he gives 0.25 grmm. as a dose. In older children he often increases the dose to 0.75 grmm. several times a day. (*Deutsche. Ztsch. f. Prakt. Med.* 28, p. 234, 1876, and *a.a.* 0.38, p. 412, v. Dr. Edlefsen in Kiel.) Quoted in *Schmidt's Jahrbucher*, Bd. 172, No. 11, 1876.—*Can. Med. and Surg. Journal.*

**THE DISCRIMINATION AND TREATMENT OF NEURALGIA.**—I have for several years used a simple and ready method of discovering whether stimulants and tonics, or whether alkalies and aperients, would be more likely to cure any given case of facial or dental neuralgia. The patient is first directed to hold warm water in his mouth, or to otherwise apply warmth to the seat of pain; and if little or no relief is thus gained, but especially if, as often happens, the pain is actually intensified, then to employ cold water in a similar way. If the cold water relieve the pain, this is regarded as being chiefly due to impurity of blood; and I have always found that it is relieved with certainty by magnesia and dieting. If, on the contrary, warmth relieve the pain very distinctly, then tonics, varying as the locality (district), constitution of patient, and precise causation, are surely indicated, and will, if in sufficient doses and combined (when necessary) with sedatives, remove—for a time at least, but often altogether—the insufferable pain. Many cases have occurred in which patients, at first resolutely bent upon having one or more teeth extracted, have been enabled to retain them for years simply by putting in practice this test and its associated treatment. There are some cases of neuralgia in overworked persons in which both plans of treatment are required. A man catches cold and has hemicrania. He is better out-of doors; but, upon entering a warm room, is shortly in unendurable pain, especially about one eye, which becomes congested and tear-streaming. A single large dose of magnesian aperient, followed by ten, or fifteen-grain doses of ammonium chloride in infusion of bark, will remove this condition. Again, the same patient may at one time require the magnesia plan and at another time the tonic and stimulant plan for pain in the selfsame nerve, this difference being shown and the proper method suggested by the altered effect of cold and heat; and it is probably the want of recognition of this fact which produces the apparent fickleness and uncertainty of any particular drug, such as phosphorus, guarana, quinine, etc., in this disorder.—T. CHURTON, M.B., Physician to the Leeds Dispensary.—*Brit. Med. Journal.*

## THE MUSCULAR ARTERIOLES : THEIR STRUCTURE AND FUNCTION IN HEALTH AND IN CERTAIN MORBID STATES.

BY GEORGE JOHNSON, M.D., F.R.S.

I have already referred to the hypertrophy of the left ventricle as an intelligible physiological result of the more forcible muscular effort required to propel the blood through the resisting arterioles. During the progress of the cardio-vascular changes, it happens not unfrequently that the walls of the large arteries undergo more or less of structural change. They become thickened and indurated, and, as a result of these textural changes, their elasticity is more or less impaired. These structural changes in the walls of the larger arteries may be partly caused by the excessive strain to which they are subjected under the influence of the high tension resulting from the antagonism between the resisting arterioles and the hypertrophied ventricle. It is a matter of common observation, that the walls of the arch of the aorta not unfrequently have their texture injured and their elasticity impaired by the forcible distension to which they are subjected when, in consequence of incompetence of the aortic valves, the left ventricle has become much dilated and hypertrophied.

In part, perhaps, the arterial degeneration in cases of Bright's disease may be excited by the morbid quality of the blood which they are continually transmitting—the same morbid quality of blood as that which not uncommonly sets up inflammatory changes in the lining or the investing membrane of the heart itself. Whatever may be the determining causes of the structural changes in the larger arteries, it is certain that, since the elasticity of the large arteries is a force which aids the heart in propelling the blood onwards, the loss or impairment of that elasticity must add to the work of the heart, and thus tend to increase the hypertrophy of the left ventricle. Hence the resistance to the blood-current resulting from the excessive contraction of the muscular arterioles is still further increased by the not infrequent complication of degeneration of the walls of the large arteries.

Dr. Galabin, in the pamphlet before referred to, has shown, from a comparison of the *post mortem* records at Guy's Hospital, that hypertrophy of the left ventricle is more frequently associated with granular kidney and healthy large arteries than with atheromatous arteries and healthy kidneys. He also shows that the hypertrophy of the ventricle, which results from degeneration of the arteries alone, is less in amount than that which is often associated with disease of the kidney while the large arteries are healthy. This result might have been inferred from the experiments on apnoea referred to in my last lecture. For, since it has been proved that the combined force of contraction in the muscular arterioles is greater than that of the ventricle, it is evident that the contracting arterioles would impede the circulation, and so add to the work of the ventricle in a greater degree than the degeneration and impaired elasticity of the large arteries.

In the advanced stages of renal degeneration, some of the muscular arterioles may undergo degenerative changes, partly perhaps due to the impure blood which they transmit, and partly to the excessive strain to which they are subjected by the forcible contraction of the hypertrophied heart. In the so-called lardaceous form of renal disease, the muscular arterioles very early undergo this degenerative change, and, their contractile power being thus impaired, they are unable to regulate or to impede the circulation. Hence it happens that hypertrophy of the heart is rarely associated with this lardaceous form of disease.

Amongst the accidental injuries which result from the high arterial tension associated with renal disease, one of the most frequent and most serious is the occurrence of *rupture of one or more intracranial arteries*, and consequent hæmorrhage into the substance or on the surface of the brain. It has been a debated question with some writers on cerebral hæmorrhage, whether the occurrence of that accident is favoured by hypertrophy of the left ventricle. When hypertrophy of the heart is a result of disease of the aortic valves, or of degeneration with impaired elasticity of the walls of the large arteries, it is generally no more than sufficient to overcome the impediment thus

offered to the circulation. The strength of the left ventricle, therefore, in such cases is not a true measure of the force with which the blood is sent into the distal arteries. On the contrary, it is a measure of the difficulty with which the blood is transmitted through the primary branches, and, therefore, through the entire system of arteries. When hypertrophy, thus originating, is associated, as it sometimes is, with cerebral hæmorrhage, the reason is that the hypertrophy and the hæmorrhage are joint results of one common cause, namely, degeneration pervading more or less extensively the arterial tree. The hypertrophy of the left ventricle is a consequence of degeneration of the aorta and its primary branches. The cerebral hæmorrhage is a consequence of a similar degeneration of the arteries of the brain.

The state of the circulation is very different when the left ventricle has become hypertrophied, in consequence of the impediment resulting from contraction of the hypertrophied muscular arterioles in connection with degeneration of the kidney. In this state of things, while the arterial stopcocks are resisting the passage of the morbid blood, the strong left ventricle is forcibly driving it onwards. There is thus an excessive strain upon the whole length of the arterial pipes, between the stopcocks and the cardiac forcing-pump. One of the bits of arterial tubing being overstretched, becomes brittle, and breaks; then the powerful ventricle forces the blood through the ruptured artery into the yielding tissue of the brain, and a rapidly fatal sanguineous apoplexy is the result. It is a well known fact that some of the most formidable cases of cerebral hæmorrhage are those which are associated with granular contraction of the kidney.

Here it may be convenient to discuss the phenomena called *reduplication or doubling of the first sound of the heart*, which many observers have noted as being one of the most frequent results of the high arterial tension associated with various forms and stages of Bright's disease. Dr. Sibson devoted much time and labour to the investigation of this physical sign of arterial tension, and he discussed it at length in his Lumleian lectures. He explains the reduplication of the first sound by stating that

the left ventricle, owing to the resistance offered by the tight arteries to the expulsion of its contents, continues its contraction later than the right, which has expelled its blood into the pulmonary artery with comparative ease. The shock of the first sound is heard at the end of the contraction of the ventricle. Hence, in consequence of the left ventricle contracting more tardily than the right, there is a doubling of the first sound.

Dr. Sibson admits that there is a difficulty in reconciling this explanation of doubling of the first sound with the absence of doubling of the second sound in the same cases. If the left ventricle contract more slowly than the right, so that the sound of the two ventricles is separated by an appreciable interval, it would seem that the aortic valves must close later than the pulmonary, and there should be a double second as well as a double first sound. Dr. Sibson endeavoured to meet this difficulty by the following argument:—"In these cases, the systemic arteries are always in a state of great tension. When the blood ceases to be sent into the tight aorta, the instant contraction of the walls of the arteries sends the blood back upon the aortic walls and valve. The pulmonary arteries, at the commencement of the systole, are comparatively flaccid, but become tense at the end of it. The walls of the pulmonary artery begin to contract and send back a return wave again upon the trunk of the artery; but, as these walls are not always in a state of tension, they take a longer time to contract than those of the aorta and its branches. Owing, therefore, to the slowness of the pulmonary and the quickness of the aortic contraction, the latter, which is already heavily handicapped, makes up in speed what it loses in time, and the two systems of arteries deliver their back-stroke at the same instant."

Now, it seems to me that this explanation, while it apparently removes one difficulty, raises another of a very formidable character. If the greater tension of the aorta, in the cases of renal disease under consideration, enable it to overtake the earlier but less rapidly and forcibly contracting pulmonary artery, it seems obvious that, in the normal condition, when the aorta and the pulmonary artery commence their elas-

tic contractions at the same instant, the much greater tension of the aorta, with its thicker and stronger walls, should react upon and close its valves before those of the more feebly contracting pulmonary artery are closed, and the result would be reduplication of the second sound as a constant and normal condition. During the last two years, since my attention has been particularly directed to this subject, I have met with numerous instances of an analogous doubling of the first sound in cases of general emphysema of the lungs, with impeded pulmonary circulation and resulting fulness and hypertrophy on the right side of the heart. In these cases, the increased tension of the pulmonary artery consequent on the obstruction in the lungs can never equal the normal tension of the aorta. However great may be the hypertrophy of the right ventricle in cases of emphysema, the thickness of its wall is never equal to that of the left ventricle. If, then, in accordance with Dr. Sibson's theory of asynchronous ventricular contraction, the right ventricle, in consequence of increased tension in the pulmonary artery, complete its contraction later than the left, and thus cause the doubling of the first sound, the closing of the pulmonary valves must inevitably be effected later than that of the aortic, and the second sound must also be doubled. The reverse, however, is the case. The second sound is single in these cases of emphysema, while the first is distinctly reduplicated.

There are anatomical difficulties in the way of accepting the theory of an asynchronous contraction of the ventricles in explanation of doubling of the first sound. The muscular fibres of the two ventricles pass from one side to the other and interlace in such a manner as appears to render the synchronous contraction of the ventricles a physical necessity. And, in watching the exposed heart of a living animal in the different stages of apncea—first, in the stage of systemic obstruction, with distension of the left cavities, and later, during the period of pulmonary obstruction, with great distension of the right cavities and comparative emptiness of the left—I have particularly observed the uninterrupted exact synchronism of the contractions on the two sides.

A consideration of the difficulties which present themselves in relation to Dr. Sibson's theory of reduplication of the first sound in connection with Bright's disease led me to seek for another explanation of the phenomena;\* and last year I ventured publicly to suggest that the true explanation is to be found in the fact that *the contraction of a dilated, and especially of an hypertrophied auricle, becomes audible, and thus the first division of the double first sound in the cases under consideration is the result of the auricular systole.* I believe that this explanation of reduplication of the first sound will be found consistent with all the ascertained facts. I was led up to this explanation by observing that the rhythm of the heart's sounds in cases of reduplication is precisely the same as that of the triple pericardial friction-sound which may often be heard in cases of pericarditis, the first element of the triple friction-sound being caused by the systole of one or both auricles roughened by lymph.

This triple pericardial friction-sound may require here a few words of explanation. For some years past, when describing the friction-sound of pericarditis, I have been in the habit of speaking of it as not merely double to-and-fro—but, in a large proportion of cases, as triple, a third sound often intervening somewhere between the other two. I said "somewhere", because until recently I could not tell at what period of the heart's revolution the third sound occurred. I got the first hint towards the solution of the problem from a very interesting clinical lecture published by the late Dr. Hyde Salter (*Lancet*, July 29th, 1871, p. 151). In that lecture, Dr. Salter described a case of rheumatic pericarditis, in which a friction-sound double over the mid-sternum became triple over the right third intercostal space, close to the sternum; and, as this triple character of the friction-sound was most marked when the stethoscope was placed directly over the right auricle, Dr. Salter said: "I feel no doubt that the third element of the sound, on passing from the surface of the ventricle to that

\* A Clinical Lecture on Triple Pericardial Friction-Sound, and on Reduplication of the First Sound of the Heart (*Lancet*, May 13th, 1876).

of the auricle, is due to auricular pericardial friction." This patient recovered.

In a second case of renal pericarditis related by Dr. Salter, a single pericardial friction-sound of distinctly presystolic—that is, auricular systolic—rhythm was heard over the third costal cartilage, about an inch to the left of the sternum; and the patient dying a few days afterwards, the left auricle was found covered and roughened by lymph. "The roughening was confined to the surface of the auricle, and, therefore," Dr. Salter remarks, "the friction-sound coincided with the movements of the auricle."

Not long after the publication of Dr. Salter's lecture, a man was admitted under my care with granular kidney in an advanced stage. A few days after his admission, I noted a presystolic friction-sound, most distinct between the left nipple and the sternum; and, as the sound was evidently synchronous with the auricular systole, I stated at the bedside that it was probably caused by recent lymph on the surface of one auricle. Three days later, in addition to the presystolic friction before noted, there was a systolic friction-sound heard most distinctly over the apex of the heart, just to the left of the mammary line, the heart being enlarged. I then expressed my belief that, besides the roughening of the auricle by lymph, there was a patch of lymph near the apex of the ventricle. In the course of about a month, first the presystolic friction ceased to be heard, and then the systolic friction ceased and was replaced by a systolic blowing murmur at the apex. The patient died after being rather more than two months in the hospital; and, at the inspection, we found, as we had expected, that the right auricle and the apex of the right and left ventricles were covered by lymph, the smoothing down of the surface of which by friction accounted for the cessation of the friction-sounds which were distinctly audible when the surfaces were roughened by recent exudation. The margins of the mitral valve were thickened by lymph, and thus the regurgitant mitral murmur was explained.

And now, having learned from the study of Dr. Salter's recorded cases, and from the observation of this one case under my own care, that

an auricle covered by lymph may cause a friction-sound of presystolic rhythm, I saw that in this sonorous influence of the contracting auricle was to be found the interpretation of the triple friction-sound of pericarditis with which I had long been familiar as a clinical fact, although I had not heretofore been able to explain it.

When the general surface of the heart, including both auricles and ventricles, is covered by recent lymph, the friction-sound is distinctly triple, *rub-rub-rub*, reminding one, as Dr. Salter says, of the triple sound of a canter. The first two divisions of the triple sound occur in quick succession, the third after a longer interval; then follows a pause, and again the *rub-rub-rub* occurs. Now, if, while we are listening to this triple sound, we place our finger over the heart's apex, or over one carotid artery, and at the same time bear in mind what we have seen of the rhythmic contractions of the exposed heart of a living or a recently dead animal, we can readily perceive that the first element of the triple sound is auricular systolic, the second ventricular systolic, and the third ventricular diastolic; while the silent interval which follows coincides in time with the post-diastolic pause. The relation of the triple friction-sound to the heart's movements may be represented as follows.—

Rub	}	Auricular systole.
Rub		Ventricular systole.
Rub		Ventricular diastole.
Rub	}	Auricular systole.
Rub		Ventricular systole.
Rub		Ventricular diastole.

I have thus briefly referred to the triple friction-sound of pericarditis, for the purpose of pointing out that the rhythm of the heart's sounds in a case of reduplication of the first sound is precisely the same as that of the triple friction-sound. The triple friction-sound being represented by *rub-rub-rub*, the triple sounds in a case of reduplication may be expressed by *rat-tat-tat*. The cantering character of the sounds may be imitated by bringing down sharply upon the table in quick succession the ends of three flexed fingers, making the two first taps nearer together than the second and

third. The friction-sounds are longer and more nearly continuous, but I repeat that the rhythm is precisely the same in the two classes of cases. The relation of the triple sound to the heart's movements may be represented as follows.—

Rat	}	Auricular systole.
Tat		Ventricular systole.
Tat		Ventricular diastole.
Rat	}	Auricular systole.
Tat		Ventricular systole.
Tat		Ventricular diastole.

The reduplication of the first sound in cases of Bright's disease is usually heard most distinctly between the mamma and the sternum in the third left intercostal space; that is about the line of junction between the auricle and ventricle. The sound may be single or indistinctly double at the apex, while it is decidedly double at the third interspace and again single over the aorta. This statement of the position in which the reduplication is best heard accords with Dr. Sibson's account; but our explanations differ essentially. He states that, in this position, the asynchronous contraction of the two ventricles is best heard, while I maintain that the contraction of the tense, dilated, and often hypertrophied auricle is there heard immediately before the sound of the ventricular systole.

The question then arises, Does the contraction of the auricle afford a satisfactory explanation of the first division of the reduplicate sound? I believe that it does. It is of course admitted that in the normal state the contraction of the auricle, contrary to Laennec's original theory of the heart's sounds, is inaudible; but we have positive evidence of sound resulting from the auricular systole in two distinct morbid states. First, as a result of constriction of the mitral orifice, we have the now well-known presystolic—or, as Dr. Gairdner happily designates it—the auricular systolic mitral murmur. In these cases, the impediment resulting from mitral constriction causes a slow but forcible auricular systole with a resulting presystolic, that is, preventricular systolic murmur, followed by a short first sound, the result of rapid contraction of the partially filled left ventricle. Second, when the surface of an auricle is roughened by lymph, there occurs the presystolic, or rather the auricular systolic friction-sound. Third, as a result of obstruction in the systemic arteries, and consequent distension of the left auricle, either with or without hypertrophy of its walls, we have, as I believe, an audible au-

ricular systole, constituting the first division of the reduplicate first sound in cases of Bright's disease. The rhythm of this auricular systolic sound—its place in the heart's revolution—is precisely the same as that of the auricular systolic mitral murmur, and of the auricular systolic pericardial friction-sound; and this identity of rhythm in the three classes of cases affords one of the strongest proofs that the sound in each case is caused by the auricular systole. The triple friction-sound of pericarditis, and the triple sound associated with doubling of the first sound, are alike suggestive of a canter.

I have before stated that the reduplication of the first sound occurs not only in connection with Bright's disease, but it is very commonly associated with the impeded pulmonary circulation resulting from advanced general emphysema of the lung. I have observed it frequently in elderly persons with degeneration and rigidity of the arterial walls; also very distinctly above and to the right of the left nipple in some cases of mitral regurgitation. There is one feature which is common to all these cases, and that is an impeded circulation either pulmonary or systemic, and the obstruction acting backwards causes distension, and by degrees hypertrophy of one or both auricles. It is obvious that an impediment commencing in the systemic arteries, or on the left side of the heart, may by a retrograde influence extend through the lungs to the right cavities of the heart.

In some cases of coexisting emphysema of the lungs and chronic Bright's disease, both sides of the heart become simultaneously hypertrophied, and the reduplication of the first sound is distinctly heard over an extensive surface. During the last year I have seen several examples of this complication. It is obvious that the theory of asynchronous ventricular contraction entirely fails to explain the reduplication which results from a simultaneous—equal or nearly equal—impediment in the systemic and in the pulmonary vessels. An equal retardation of the two ventricles would not throw one behind the other. But the auricular theory completely explains the phenomena. That a distended, and especially an hypertrophied auricle should produce sound by its contraction, is quite consistent with what we know of the causation of the normal sounds of the heart. While the first sound is caused by the tension of the ventricular walls and the auriculo-ventricular valves during the systole of the ventricle, the second sound results from the sudden tension and vibration of the arterial valves and walls during the diastole of the ventricle. In like manner, it is maintained that when, in consequence of excessive arterial pressure, there is great distension of the heart's cavities, the tense auricle contracts audibly and

causes the earlier division of the double first sound, the double sound being the result of the auriculo-ventricular systole.

That the contraction of the terminal muscular arterioles, excited by blood-contamination, the result of renal disease should act backwards through the systemic arteries and the left ventricle and auricle, so as to cause an appreciable modification of the heart's sounds, and ultimately hypertrophy of the muscular tissue of the propelling heart and of the resisting and regulating arterioles, is an interesting illustration of the correlation of physiological forces and of the intimate relation between physiology and pathology.

In confirmation of the explanation which I have given of the so-called reduplication of the first sound, I may mention that, after I had written the lecture in which I first publicly propounded this theory, my attention was directed to a recently published thesis by Dr. Exchaquet, of Paris, entitled *D'un Phenomene Stethoscopique propre a certaines Formes d'Hypertrophie du Cœur*, in which I found that my explanation of the phenomena had been anticipated.

The author of the thesis gives the results of numerous observations made by his teacher M. Potain, on that modification of the heart's sounds which Dr. Sibson called reduplication, but which the French observers designate *bruit-de-galop*. Dr. Exchaquet quotes Dr. Sibson's Lumleian Lecture, raises various strong objections to his theory of asynchronous ventricular contraction, and maintains that the presystolic element of the double first sound is caused by an *abnormally energetic and forcible contraction of the left auricle*. I was much interested to find that my explanation, arrived at quite independently, had thus been anticipated and confirmed by M. Potain, who points out that, when the chest is not thickly covered by fat, the presystolic contraction of the auricle may be seen and felt in the third left intercostal space, where, in the same cases, the *bruit-de-galop* is also most distinctly heard.

I find, however, that M. Potain looks upon this modification of the heart-sounds as being almost invariably associated with certain forms of albuminuria. As an exaggeration of a normal phenomenon, he has observed it to a very slight degree, and as a transient condition in persons free from organic disease and from functional disorder of any kind; but when the *bruit-de-galop* is pronounced and permanent, he believes it to be invariably associated with albuminuria and resulting distension of the left auricle; and, in fact, he looks upon this acoustic sign as diagnostic of certain forms of albuminuria. The author makes no reference to the

very frequent association of the *bruit-de-galop*, or doubling of the first sound, with emphysema, and other conditions, resulting in an impeded circulation through the lungs, and consequent distension of the right auricle, but often unassociated with albuminuria: a class of cases of very common occurrence to which I have directed attention in this lecture.

The reduplication of the first sound, upon the interpretation of which I have dwelt so long, is not without its practical prognostic significance and value, in so far as it affords undoubted physical evidence that the impediment to the circulation, whether in the pulmonary or in the systemic vessels, is acting backward through the ventricle upon its associated auricle, and is causing some degree of auricular dilatation and hypertrophy; and, on the other hand, the cessation of the reduplication, as, for instance, in some cases of acute and transient Bright's disease, is evidence of returning freedom of the circulation, and is thus far of favourable omen.

Again, it is obviously important to observe and study this peculiar modification of the heart-sounds with sufficient care to distinguish it from any form of valvular murmur. I do not doubt that a modification of reduplication, by which the two first elements of the triple sound are blended together, so as to give the first sound of the heart a prolonged character, has often been mistaken for the murmur of mitral regurgitation; and this error of observation has been made the basis of an alarming, but wrong, prognosis. I scarcely need add that our interest and our duty alike prompt us to avoid so serious a mistake.—*British Medical Journal*.

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TREATMENT OF DYSENTERY BY NITRATE OF SODIUM (*La France Medicale*, 1877, p. 91; from *Moniteur Therapeutique*).—Nitrate of sodium in large doses acts as an ordinary saline purgative. Like the salines, also, it constipates if in part absorbed. It is for this reason that it has frequently proved useful in diarrhoea and dysentery. Caspary (*Deutsche Klinik*) recommends it very highly. The dose differs according to the severity of the case. In true dysentery, twenty-five grammes (about 3vj) may be administered during the twenty-four hours, in divided doses. Should there be any inflammatory complication on the part of the small intestine, the dose should be less,—fifteen to twenty grammes (3iv ad v). The medicine should be administered in a mucilaginous mixture, which should



be warmed, cold being injurious in dysentery. When the case is a light one, improvement will be noticed within twenty-four hours. In severe cases several days are required to produce a favourable effect. If within forty-eight hours no improvement is observable, and if the dysentery is rectal, the dose should be increased. If, on the other hand, tenesmus having ceased, there still remain symptoms of inflammation in the small intestine, the dose should be reduced to eight or even five grammes. An increased number of stools indicates too large a dose.—*Phil. Med. Times.*

### TREATMENT OF CATARRHAL JAUNDICE.

Dr. Krull, of Gustrow, Mecklenburg (*Berlin. Klin. Wochenschrift*, No. 12, 1877), recommends enemata of cold water as an excellent remedy in the above disease. One or two litres of water at a temperature of 59 degrees Fahr., which may be gradually increased to 72 degrees Fahr., are to be slowly injected into the rectum by means of an irrigator once a day. The patient is to retain the water as long as possible. The first effect of this treatment is the rapid disappearance of oppression in the epigastrium, as well as of nausea and headache; the appetite quickly returns. In half of the cases thus treated (eleven in all) the fæces were tinged with bile after the second injection; and in the cases of longest duration, in one of which the disease had existed for more than a year, their normal colour returned not later than the fourth day. The largest number of injections used in any one case was seven. Most of the patients had previously been treated unsuccessfully by the ordinary methods. Dr. Krull explains his results on the supposition that the cold water not only increases the peristaltic action of the bowel, but also excites sufficient contraction of the bile-ducts to enable them to overcome the obstacle due to catarrhalswelling or inspissated mucus at the entrance of the duodenum.—(*Clinic.*)

Dr. Cameron, late house surgeon to the Montreal General Hospital, has been presented by his friends with a life-governorship of the hospital.

### ON THE USE OF THE CHLORATE OF POTASSA IN DIPHTHERIA AND PSEUDO-MEMBRANOUS CROUP.

BY THOMAS M. DRYSDALE, M.D.

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"I have been for many years in the habit of prescribing a saturated solution of chlorate of potassa, thirty grains to the ounce; and giving, according to the age of the patient, a teaspoonful, a dessertspoonful, a tablespoonful, or even a larger quantity, every three hours, in mild cases; but in cases of extreme urgency I have given as often as every half hour, and with the happiest results."

These doses, you will perceive, are much larger than those generally recommended, for each tablespoonful contains fifteen grains, each dessertspoonful seven and a-half grains, and each teaspoonful three and three-quarter grains, and are given according to the age of the patient. For instance, to a child under two years old, a teaspoonful; from two to ten years old a dessertspoonful; and over this age a tablespoonful, which is also the dose commenced with in adults; the dose being repeated at the intervals already stated, according to the severity of the case. A child, then, of one year of age, suffering from a moderately severe attack of diphtheria, will take, if the medicine is given every two hours, forty-two grains in twenty-four hours. Another, under ten years of age, will take, in the same time, one hundred and eighty grains. While one still older will take three hundred and thirty grains. If the case is severe, of course much more will be taken.

In an immense number of these cases I have continued the use of this salt for days, and in some for weeks, without seeing any evil results follow, except a little gastro-intestinal irritation in some young children, which I have found readily controlled by combining opium with the mixture. In fact, we need not fear to give this salt even more freely than has been here recommended, as the experiments of Isambert, Fountain, Tully, and others prove; but when we can obtain all the good results with these doses, of course it would not be wise to give larger.

The formula that I am in the habit of using is as follows :—

R.	Pulv. potassæ chlorat.	ʒij
	Syr. limon.	ʒi ʒj
	Aquæ,	ʒi ʒij. M.

This gives a mixture which is pleasant to the taste, and is readily taken by children ; an important fact, the advantages of which need not be pointed out to you.

The use of the chlorate of potassa in diphtheria and membranous croup has some advantages not possessed by other remedies. All local treatment, except by the solution itself, is unnecessary, for, that it has a solvent action on the membrane, has been proved by M. Barthez, and the parts involved are so frequently bathed by swallowing it, that a true and free topical application is made every time it is administered. Taking advantage of this local action, I direct the nares to be injected with it when they are affected ; and in cases of croup, particularly after tracheotomy, apply it by means of the atomizer.

Another advantage is that other remedies may be used in connection with it. For instance, when there is much spasm of the larynx emetics may be given, and the chlorate used after them ; or, when the case is decidedly asthenic, iron and quinine, stimulants and nourishment may be administered at the same time.

This treatment has proved so successful that when called to an ordinary case of diphtheria, before it has reached the larynx, or travelled upward toward the brain, producing convulsions, I feel but little apprehension ; for, in a large practice of many years, but few cases have been met with which have resisted it.—*Med. and Surg. Reporter.*

**SICK HEADACHE.**—This troublesome affection has recently been treated with a certain degree of success by the citrate of caffeine, especially in the form of the "granular effervescent" salt, which is now produced in this country. A heaping teaspoonful, containing one grain of the citrate, is the dose to begin with, and may be repeated every hour or two.

## Surgery.

### DISLOCATION OF THE LONG HEAD OF THE BICEPS FLEXOR CUBITI MUSCLE. ITS DIAGNOSIS AND TREATMENT.

BY JAMES S. GREEN, M.D., ELIZABETH, N. J.

(Read before the Union County, N.J., Medical Society, April 3, 1877.)

On the 14th of January last, I was called to see a lady, aged 52 years, of large frame and very fleshy, who was suffering severe pain in her right shoulder, which had, within the last three months, been the seat of two injuries, occasioned by violence. The history of her injuries was as follows:—"Early last November she fell upon a slippery front door step and was precipitated to the sidewalk, when she felt she had injured her shoulder. She rode immediately home, where, getting from her carriage, she was improperly supported by her attendants, and fell again, when she felt the bone, as she termed it, return to its place, and her acute symptoms were relieved. She suffered a week or more from the usual soreness, and then considered herself well again.

About ten weeks after the first accident, while attempting to drive a bird into its cage, striking at it overhead with a newspaper, she was seized with violent pain in the same shoulder, and the arm fell to her side. The next day I saw her. She was suffering severe pain in the shoulder-joint upon motion, especially when the arm was moved backwards or upwards. The head of the humerus could be felt rotating in the glenoid cavity ; there was no fracture of the acromion, coracoid, or the scapular end of the clavicle ; no flatness of the shoulder ; the arm could be brought closely to the body, and was most comfortable while there. On the anterior and inner surface of the shoulder there was a space about a finger's width and a finger's length, which was exquisitely tender on pressure. Any motion putting the tendon of the *pectoralis major* on the stretch, gave intense pain at this place. Movement at the arm backward passively, or by the action of the *latissimus dorsi*, increased violently a pain along the track of the musculo-cutaneous nerve,

which pain, however, was constantly present as far down as the external condyle of the humerus. The patient informed me that she was obliged to bind her arm tightly to her body during the night and day, so intense was the pain upon the slightest motion. *Active* flexion of the forearm upon the arm to an angle less than a right angle, gave most acute pain at the shoulder.

Having suffered with irregular heart action, probably due to a fatty heart, she was unwilling to take an anæsthetic, and very averse to having an effort at manipulation made to relieve her trouble. Nothing was done but the application of a sling and bandage to support and keep the arm quiet, and the use of anodyne lotions to the shoulder.

Ten days after the last accident, being relieved from her sling and bandage, she went out on the piazza of her house to fasten a window shutter. The platform being slippery, she felt herself falling, and tried to catch hold of the shutter with her left hand, but missed it. She then threw her injured arm upward and backward in her effort to save herself from falling, and, being seized with the most agonizing pain, felt something return to its place with a snap.

Two days after this occurrence I saw her. The pain at the shoulder had remarkably diminished since my last visit, and the power to use the latissimus dorsi and deltoid muscles without severe pain had returned. The patient dated her improvement from the time she fell on the piazza. She steadily improved from this time under the use of passive motion and frictions, and has now entirely recovered the use of her limb.

The question arose in my mind, what was the lesion? It was no common accident, and one upon which very little has been written.

*Dislocation of the humerus* was differentiated by the presence of the head of the bone in the glenoid cavity, and by the fact that the arm could readily be brought to the side, and was more comfortable in that position.

*Fracture of the neck of the humerus* was also impossible, because the head of the bone rotated with the shaft.

*Diastasis* of any of the epiphyseal extremi-

ties of the bones about the shoulder joint was precluded by the patient's age.

There was no fracture of the acromion or coracoid processes of the scapula, or the acromial end of the clavicle.

What injury, then, could account for the violent pain and inability to move the part? *Dislocation of the long head of the biceps muscle* from its bed in the bicipital groove of the humerus alone answers the question satisfactorily.

When we review the surgical anatomy of the part, and interpret the symptoms by its light, the explanation becomes interesting and convincing. The long head of the biceps, arising from the upper edge of the glenoid cavity, passes across the head of the humerus in a special sheath taken from the synovial lining of the joint, and, crossing between the tuberosities of the humerus, enters the bicipital groove, in which it is held by a fibrous bridge. At the anterior lip of the groove, the tendon of the pectoralis major is inserted, and into the posterior lip the latissimus dorsi and teres major have their insertion. Between the bone and the biceps the musculo-cutaneous nerve passes, after it has perforated the coraco-brachialis muscle.

Now, the long head of the biceps, after its dislocation from the groove, lies on and beyond the anterior edge of the groove, under the tendon, and at the insertion of the pectoralis major muscle. Consequently, the arm being brought closely to the body, there is the least pain, because the tendon of the pectoralis major muscle is thereby relaxed and the injured groove and musculo-cutaneous nerve is not pressed upon. The use of the deltoid muscle produces pain because it puts the pectoralis major secondarily on the stretch. The action of the latissimus dorsi and teres major also gives pain, because they are antagonistic to the pectoralis major. Flexion of the forearm upon the arm gives great discomfort, for the obvious reason that the motion is produced by the injured muscle. Pain along the distribution of the musculo-cutaneous nerve, down to the external condyle, is due to the unnatural pressure of the nerve upon the bone by the displaced tendon.

Now, having diagnosed our case conclusively, what are the indications for treatment? Having

placed the patient under an anæsthetic, bend the forearm upon the arm at an angle *greater* than a right angle, rotate the hand outward, and at the same time carry the arm upwards and backwards. The rotation of the hand will turn the shaft of the bone and bring the bicipital groove toward the displaced tendon, while the upward and backward motions of the arm tend toward the same result. This plan of treatment is drawn from the accidental mode on which my patient reduced her own dislocation, and is one which, as far as I am aware, has never been before advised.

The surgical literature upon this subject is extremely meagre, and no directions are given in the books for the relief of this distressing condition, except, perhaps, by Dr. Gross, in his work on Surgery. The advice there given is to relax the tendon and press it in place with the fingers, a procedure which will not be followed with the success desired.

Dr. Frank Hamilton, in his work on *Fractures and Dislocations*, page 578, under the head of "partial dislocations" of the humerus, gives a case reported by Alfred Mercer, of Syracuse, New York, in the *Buffalo Medical Journal* for April, 1859. Also, in *Pirrie's Surgery*, edited by John Neill, M.D., page 255, we find an account of a case in which an autopsy was held, and the tendon was found to be dislocated.

Mercer's case was, in many particulars, identical with the one just reported above.—*Virginia Medical Monthly*.

**DRESSING FOR BURNS.**—We find in the *Lyon Medical* the formula for a preparation recommended by Rice as presenting all necessary qualities required in dressing burns. In a litre ( $1\frac{3}{4}$  pints) of cold water 440 grammes ( $14\frac{3}{5}$  lbs) of clear glue in small pieces is softened; solution is completed by the aid of a water-bath, 60 grammes (338.8 grains) of carbolic acid are then added. Evaporation is continued until a bright pellicle forms upon the surface. Upon cooling, the mixture becomes an elastic mass, which may be liquified by heat whenever wanted for use. This is applied by means of a brush, and in one or two minutes, forms a brilliant, flexible and almost transparent coating.—*Jour. de Med. et de Chir. pratiques*, Feb., 1877.

## CASE OF UNUNITED AND ADHERENT TENDO ACHILLIS.

The treatment of cases of ununited tendo Achillis, the result of an external wound, has hitherto been considered very unsatisfactory, more particularly when the divided ends have become much retracted and adherent to the skin and surrounding textures. The retracted ends of the tendon in such accidents have occasionally been brought together and secured by silver wire or other sutures; but the inflammation and suppuration which usually follow this proceeding have, in the majority of cases, rendered the operation a failure. Now, however, that we have, in the antiseptic treatment and catgut suture, sure means of making the necessary wound, and securing the divided parts without risk of suppuration, I am encouraged to hope that the condition of ununited tendons will, in the future, prove more amenable and satisfactory in regard to its treatment. In confirmation of this hope I report the following case, which thoroughly proves the success of the antiseptic treatment in a very aggravated example of the accident under consideration. From the condition of the divided ends of the tendon and surrounding tissues, as accurately ascertained during the operation, I am of opinion that nothing short of the treatment adopted, or of some similar interference, would have restored the tendon to its proper state and usefulness.

J. P.—, aged thirty-seven, a strong healthy sailor, was admitted into my wards in the Royal Infirmary on the 10th March, 1877. Rather more than two months before admission the patient accidentally struck the back of his left leg with an axe and inflicted a wound which cut across the tendo Achillis a little above the ankle. After the injury the leg was kept in a straight position until the wound healed; but when the patient commenced to move about he found that he had little or no control over the foot. Finding that he was not improving, and being quite unfit to follow his employment, he applied for advice to Dr. Wilson, of Greenock, who sent him here to be under my care.

An examination of his condition showed a cicatrix across the lower end of the tendo Achillis, which had been completely divided. There

was a distinct interval of fully one inch and a-half between the divided ends, and there was not the slightest attempt at any union between them. The upper end was adherent to the skin, and when the muscles of the calf were put into action the tendon only drew upon the skin and surrounding tissues, and had no direct influence upon the heel. In consequence of this condition the patient's foot was useless, and he was quite unable to follow his employment.

On the 13th of March I performed the following operation, with the hope of relieving his unfortunate state. The leg, as far as the knee, was rendered bloodless according to Esmarch's plan, and then an incision about three inches long was made on the inner margin of the tendon, so as to expose its ends where divided. A little careful dissection thoroughly disclosed the affected parts, when it was found that the tendon had been completely divided about one inch and three-quarters from its insertion into the os calcis. The divided ends were retracted for about an inch and a-half, and between them was a thin-walled cyst or sac containing a little fluid serum tinged with blood. There was no trace of any new organized material forming a bond of union between the divided ends, but the lower end was rounded off in the most perfect manner. The upper end was somewhat enlarged and jagged in appearance, and was adherent to the skin and cicatrix of the external wound. Having first freed the upper end from its attachment to the skin and the cicatrix, I pared both ends of the tendon, removing a thicker slice from the lower than from the upper one, on account of the rounding off of the former. Then, by flexing the leg to almost a right angle, the ends were brought in contact and secured by means of two prepared catgut sutures of double "medium" thickness. The limb was then firmly adjusted in this flexed position by applying the apparatus usually employed in the treatment of ruptured tendo Achillis. The operation was performed under the antiseptic spray, and the wound was dressed in the usual way. The antiseptic dressing was continued, and changed as often as required, until April 1st, when, the wound being quite superficial, boracic lotion was substituted for it. Three weeks after the operation the parts were

carefully examined, and, as good union had taken place between the ends of the tendon, the limb was slightly straightened, so as gradually to stretch the new material and obtain the proper lengthening of the tendon. This treatment was carefully continued, and on April 22nd it was found that the result of the operation was perfect. The patient had entire control over the foot, the union of the tendon was strong and complete, and the heel could be brought to the ground without any difficulty.—*London Lancet.*

We subjoin the conclusions of a paper on "The Anhydrous Dressing of Wounds," which lately appeared in the *London Lancet*, from the pen of Robert Hamilton, F.R.C.S., Liverpool:—

To sum up as shortly as possible, I would say that in the treatment of compound fracture, opening of joints, and large incisions, I advocate Lister's method with this modification, that the subsequent dressings after the first should be under the balsam spray rather than the carbolic spray, and that the material placed next to the wound should be dry, believing that the free use of the carbolic spray upon the wound, the washing out of the latter, as is too often done, with carbolic lotion, and the application of lint freshly moistened with carbolic lotion, all lead to a production of pus.

Next, that, as the almost equal success which is obtained in the hands of many surgeons from the use of Friar's balsam merely, in the dressing of small wounds, and even compound fractures, must be due as much to the avoidance of moisture, or rather of water, as it is to the antiseptic properties of the balsam, therefore it is a strong argument in favour of our being very chary in the use of the former.

Thirdly, that the application of the antiseptic principle in the dressing of burns, scalds, and lacerated wounds, with loss of skin, has led to no better results than many of the other methods in vogue.

And, finally, that in so far as we can keep an abraded surface free from all external agencies, just so far shall we succeed in facilitating the healing process. Amongst the external agencies which are injurious water takes a more prominent position than the atmosphere.

Therefore, the direction in which further advances in the dressing of large lesions is likely to be successful is certainly in the avoidance of heat and moisture.

## CASE OF FETID DISCHARGE FROM NOSE, TREATED BY A NEW OPERATION.

(Under the care of Mr. HARRISON CRIPPS.)

A. B—, aged thirty, probably syphilitic, struck the bridge of her nose five years ago in falling against the corner of a table. She suffered considerable pain at the time, and hæmorrhage was profuse. The nose remained tender and swollen for two or three months, and the nasal passages became so much obstructed that she was scarcely able to breathe through them.

Six months after the injury a fetid discharge from the nostrils commenced, and continued up to November last, when she first presented herself at the hospital. The nose was at that time considerably flattened, and both nostrils were reduced to little more than pin-hole apertures. The soft parts between the nose and upper lip were deeply ulcerated, and flowing over this ulcerated surface from the nostrils was a thin ichorous discharge. The fetor arising from the discharge was beyond all description, and pervaded the room to an extent scarcely bearable. She complained bitterly of her condition, being an object of aversion to all her friends. The introduction of a probe into the nostrils was a matter of some difficulty, and caused much pain. On the first examination no dead bone could be detected. The patient was ordered full doses of iodide of potassium, and directed to wash out the nasal cavities thoroughly with Condy's fluid, applied after Thudichum's method. She continued under observation till the middle of January, but without any marked amelioration in her condition. As dead bone could at this time be detected with a bent probe, and the patient was anxious that something should be done to relieve her, she was operated on according to the plan advocated by Rouge, of Lausanne.

Chloroform having been administered and the patient placed on her right side, the right corner of the upper lip was seized by the operator, and the left by his assistant; by this means the lip was everted and drawn upwards, while the soft parts were separated by a clean sweep of the scalpel, cutting upwards with its edge kept close to the bone. This incision extended from the second bicuspid tooth on the right side to that

on the left. By drawing upon the upper lip, the nose, together with the soft parts forming the anterior portion of the face, could be easily raised in such a manner as thoroughly to expose the nasal fossæ. A large quantity of dead bone could now be both seen and felt. The dead portions of the bone were quite loose, and were easily removed with the finger and polypus forceps. After the removal of the bone, the forefinger could be passed quite back to the posterior wall of the pharynx, the cavity feeling soft, velvety, and entirely free from dead bone. The operation was completed by replacing the lip in its natural position and retaining it there by a single strip of plaster placed transversely across the face. There was scarcely any bleeding during the operation. The wound healed rapidly by first intention, without the slightest scar or deformity. Six days after the operation a careful examination failed to detect the line of incision, so complete had the union become. The patient has been seen many times since; all discharge has ceased, the ulceration of the upper lip has healed, and there is not the least fetor to the breath. The pieces of bone removed comprised a portion of the left palate, the left inferior turbinated, and a considerable portion of the vomer. These pieces were thickly coated with a hard, mortar-like substance, exhaling a most fetid odour.

That this method of operating is one of the greatest value and importance cannot be doubted, and would seem justifiable not only in cases of ozæna, but also in some cases of polypi or other growths, for the entire removal of which a considerable space and more complete view are necessary.

Ozæna, according to the most recent observations, is dependent in the large majority of cases on a sequestrum or carious portion of bone, and it is not impossible that some of the remaining cases, supposed to be due to a constitutional cause, really arise from a local, although undetected, source of irritation. For many of the cases narrated by Rouge an examination prior to the operation had failed to detect a cause, but after the anterior nares had been exposed in no case did he fail to find a sequestrum or carious portion of bone. In one instance a portion of the bony septum was found dead, lying between the two layers of mucous membrane, a condition

of things which accounts for its not being detected prior to the operation.

In the case above narrated it was not found necessary to cut through the cartilaginous septum at its attachment to the anterior nasal spine, it having been previously destroyed by disease, but in ordinary cases before the nose can be lifted this should be done with scissors.

The ease with which the operation was performed, the thorough exposure of the nasal fossæ, the absence of hæmorrhage, and the beneficial results obtained, entirely agree with the cases described in the able paper by Rouge.—*London Lancet*.

### ECRASEURS.

The ease, rapidity, and immediate safety with which the tongue can be removed by the galvanic ecraseur ought not to lead surgeons to overlook the serious drawbacks to this employment of a most valuable application of electrical science to surgery. These drawbacks are threefold, only one of which was noticed by the various speakers at the last meeting of the Clinical Society when this subject was discussed. The great danger in the use of the hot wire arises from the putrefaction which takes place in the slough over the stump of the tongue. This poisons the air passing into the lungs, which then sets up acute and very fatal bronchitis, with, in some cases, a low form of pneumonia. We believe that most of the deaths after this operation are produced in this way.

Another danger is septic absorption from the wound, causing cellulitis around the larynx, pharynx, and great vessels of the neck, with œdema glottidis; and when the slough separates, the patient runs a serious risk of secondary hæmorrhage, which is not unfrequently fatal. These dangers are so great that many surgeons are returning to the use of the simple wire ecraseur, which, although less convenient at the time of operation, is, on the whole, safer. The wire severs the tissues without leaving a thick slough to putrefy and slowly separate, and primary hæmorrhage may be surely prevented by proceeding slowly and carefully. Rapidity in action is the danger, for the wire has to *crush*, not *cut*, its way through. If this precaution be taken, the operation should be as bloodless as if the hot wire had been used, and the consequent risks to the patient far less.—*London Lancet*.

### ON A UNIQUE CASE OF INOCULATION OF THE EYE BY VACCINE VIRUS.

In the *Medical Examiner*, Dec. 21st, Mr. Anderson Critchett relates the following remarkable case: "At the beginning of last September I was consulted by a medical man in large practice in the north of England. On examining his right eye I found the following condition:—The lids and conjunctiva were swollen and red; there were lachrymation and photophobia, and the eye resented even the most gentle examination. A large greyish-white opacity could be seen extending over the outer two-thirds of the cornea. The centre was raised, and from its general aspect and colour conveyed an impression of sero-purulent infiltration between the layers of the cornea. The condition of the anterior chamber and iris appeared to be normal. The history I received of the case was as follows:—About three weeks previous to his visit to me, this gentleman was vaccinating an infant, and, whilst stooping over the arm, a sudden and violent movement on the part of the child jerked the charged ivory point from his fingers into his right eye. Suspecting that some of the lymph had come into contact with the cornea and conjunctiva, he immediately and assiduously endeavoured to wash it out, but, as the sequel proved, without success. Inflammation supervened at the end of twenty-four hours, and was accompanied by severe symptoms, the cornea becoming gradually implicated, and developed such a form of opacity, combined with interstitial infiltration, as left no doubt that inoculation of vaccine virus had occurred, resulting in the formation of a true vaccine pustule.

"Three months have now elapsed since his first visit, all traces of inflammation have passed away, the conjunctiva has resumed its natural colour, the lachrymation and intolerance are gone, and the eye opens as readily as its fellow; but, occupying rather more than the outer half of the cornea, is a dense white opacity, which most seriously compromises the vision. As the area of clear cornea has sensibly increased since the subsidence of active inflammation, it is not improbable that further improvement may take place during the next few

## ON NECROSIS WITHOUT SUPPURATION.

BY W. MORRANT BAKER, F.R.C.S.

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The author proceeded to the consideration of the question which arose with respect to conditions so remarkable; extensive necrosis, without the formation of pus, being so rare as to be almost unknown to surgical pathology. The following were the conclusions to which the various facts and arguments brought forward by the author seemed to lead. 1. Nearly the whole of the shaft of a long bone may perish, and nevertheless, suppuration, after several weeks and months, and possibly even years, may be still absent. 2. Necrosis of a long bone may, in the absence of suppuration, closely simulate malignant disease, even to the extent of undergoing so-called spontaneous fracture; and the latter event may not, for at least many weeks, be followed by suppuration. 3. This apparently strange deviation from the course of the symptoms usually accompanying necrosis is probably due to the fact that the death of the bone is the last of a series of changes of which the earlier consist of chronic inflammation, with hypertrophy and sclerosis. 4. The symptoms of necrosis occurring in the course of chronic osteitis, more especially in adults, may be expected to pursue and do pursue a course which is different, in many respects, from that which is characteristic of the more common examples of necrosis. Suppuration is not an early event, usually, in cases of necrosis from chronic osteitis. 5. In such cases of necrosis, the endosteum as well as the periosteum contributes a large quantity of new bone. 6. It may be well, for distinction's sake, to term this variety of necrosis, in which the sequestrum is enclosed between periosteal and endosteal new bone, intra-osseous necrosis, whether with or without suppuration. 7. There exist cases of intra-osseous necrosis in which complete removal of the dead bone by a surgical operation is, from the nature of its connections, a practical impossibility; and for which, therefore, if the symptoms be sufficiently distressing, amputation is the best remedy. 8. In favourable cases, and when the disease is not extensive

months; the question will then arise how far it may be expedient to endeavour to obtain an increase of the present very limited range of vision by means of a small iridectomy inwards." In remarking on the case, which Mr. Critchett says is, as far as he is aware, the only one of the kind on record, he considers that it is of interest not only on account of its rarity, but also "as illustrating the great danger of allowing vaccine virus to come into contact with the eye, since the absorbent power not only of the conjunctiva oculi, but also of the surface of the cornea itself, is so great as to develop in the manner described a complete vaccine pustule resulting in a permanent corneal opacity. It may also suggest a possible explanation of the manner in which the cornea is frequently affected in smallpox."—(*Monthly Abstract.*)

INTUSSUSCEPTION OF THE TRACHEA.—Dr. Lang, of Oehringen, reports the following interesting case:—A man about twenty-eight years of age, slipped while climbing into a plum tree, and fell, but his feet catching in the branches, he remained hanging head downwards. He made violent efforts to raise his body so as to grasp the branch but was unable to do so, and remained in this uncomfortable position an hour before help came. Immediately after the accident dyspnoea set in, and increased from day to day. It was especially severe, and even bordered on suffocation when the patient let his head fall forward; when he held his head erect with the chin elevated the symptoms were relieved, and his condition was bearable. He wore a stiff, high stock, in order to keep his head in this position. Many physicians were consulted by him, but none could discover the cause of the dyspnoea. Percussion and auscultation revealed nothing abnormal. Ten weeks after the accident the patient committed suicide. The autopsy revealed great enlargement of the space between the second and third tracheal rings, the stretched and elongated membrane being at the same time relaxed. When the head was flexed on the breast, the lower part of the trachea telescoped the upper part, the third tracheal ring being forced inside the second, and in this way the suffocative attacks were produced. *Memoirabihren*, 11, 1876.—*Medical Record.*



the surrounding parts, after suppuration, may heal, although some dead bone is permanently confined within its new sheath; the separation of the dead from the living being indefinitely postponed. 10. The peculiarity of the case which forms the text of the paper is to be found rather in the variety of spontaneous fracture and of opportunities of examining the bone by section in cases of necrosis from chronic inflammation at an early stage before suppuration has occurred, rather than in the nature of the case itself.—*Brit. Med. Journal*.

### HYDROPHOBIA CURED BY INHALATION OF OXYGEN.

We have the authority of Schmidt and Lebedew for the following case:—

A girl, aged twelve, was bitten by a rabid pup, in the hand, on January 7th, 1876. The wound extended into the subcutaneous cellular tissue; there was scarcely any bleeding; it was at once cauterized with lapis, and had entirely healed on the seventh day. The child had suffered an attack of diphtheria three months before, which had left paralytic aphonia behind it. About the time when the wound closed she was observed to be uncommonly excitable. On the seventeenth day severe dyspnoea suddenly set in; inspiration free; expiration difficult, interrupted in character; deglutition almost impossible; pulse rapid; fingers contracted. In the course of twenty-four hours neither urine nor fæces were voided. The inhalation of about three cubic feet of oxygen produced immediate amelioration of the symptoms, and within two and a-half hours apparently restored her to her former condition of health. The next day she had a more severe attack, with tonic spasm of the muscles of the back and limbs; respiration spasmodic; complete loss of consciousness. These symptoms were relieved in forty-five minutes by the inhalation of oxygen. Slight remaining dyspnoea was treated in the same manner for the following ten days, with the addition of *camphora monobromata*, which was given for three weeks. In the first part of February she had paralysis of both lower extremities for two weeks; since then she has been entirely well, excepting the aphonia, which existed before she was bitten.—*Wratschebnija Wedomosty*, No. 32, 1876, and *Allgemeine Medicinische Central Zeitung*, No. 69, 1876.—*Med. and Surg. Reporter*.

THE BENZOLINE CAUTERY.—One of the most beautiful instruments lately placed at the service of the profession is the Benzoline Cautery. It is a French invention and may be thus described: A metal cautery of any shape is hollow, containing a double tube through which a current of benzoline vapour, mixed with air, can pass, going forwards in one tube and returning by the other. The benzoline vapour and the air are mixed together and the mixture forced through the cautery by means of an apparatus like Dr. Richardson's spray-producer. In using it, the cautery is first heated by a spirit-lamp to a moderate temperature, quite below the red-heat. Then the lamp is taken away and the benzoline mixed with air pumped through the cautery by the contrivance described above. The mixture ignites and raises the cautery to a red-heat, which can be kept up as long as may be desired by simply working the "spray-producer." Everyone who knows what a troublesome and complicated affair the galvanocautery is, will appreciate the value of this most elegant invention.—*Students' Journal*.

ACUTE TRAUMATIC TETANUS TREATED SUCCESSFULLY WITH CHLORAL INJECTED HYPODERMICALLY.—Mr. J. H. Salter records (*Practitioner*, Dec., 1876) the details of a case of acute traumatic tetanus, resulting in recovery under the treatment of repeated hypodermic injections of chloral, which he believes to be the first case treated successfully by this method. The disease resulted from a wound received during a fit of drunkenness, and followed by exposure to unusual cold, in a subject debilitated by habits of intoxication and low in the standard of intellectual development. The treatment consisted in wearing out the acute character of the disease by the continued exhibition of the drug; neutralizing the tetanic poison, so to speak, as fast as it was secreted; or, in other words, depolarizing the nervous centres excessively charged by the morbid processes of the disease.

TRAUMATIC TETANUS CURED CHIEFLY BY CURARE.—In a case of traumatic tetanus under the care of Mr. Durham at Guy's Hospital, curare was administered hypodermically, at intervals of about three hours during fourteen days. The medicine lessened the frequency and severity of the fits. The dose was at first  $\frac{1}{200}$  of a grain, increased to  $\frac{1}{100}$  and  $\frac{3}{200}$  of a grain. Eserine was tried without any apparent benefit. The only other medicines used were two  $\frac{1}{4}$  grain doses of morphia hydrochlorate and three one drachm doses of succus conii.

## Midwifery.

### LOCAL TREATMENT OF PUERPERAL FEVER.

Starting from the standpoint that the febrile affections which follow parturition, and which are generally comprehended in the expression "puerperal fever," are due to the introduction of septic matter from without, and only acquire their specific character from their seat of origin, and from the peculiar condition of the generative organs existing at the time, Dr. Heinrich Fritsch, of Halle, recommends the systematic adoption of certain antiseptic measures, not only with a view to prevent infection by the hand of the accoucheur or midwife, but also to remove and destroy any decomposing secretions which may develop in the uterus itself. In the first place, before any examination is made, the hands are to be well washed with soap and then scrubbed with a nail-brush and a solution of carbolic acid. The most convenient arrangement for preparing this solution is to have a number of thirty-grammes bottles filled with concentrated carbolic acid dissolved in glycerine (thirty grammes acid to three glycerine), and to take one or two in the pocket when called to a midwifery case. By measuring out a litre of water into a basin, and adding the contents of one bottle, a solution of a proper strength is at once ready for use. Any instruments that have to be applied must also be previously disinfected. Instead of ordinary oil, carbolic oil must alone be employed to grease the hands and instruments. The patient herself is, if possible, prepared by a sitz-bath, in which the vulva and perineum are carefully cleansed with soap. The vagina is then washed out with carbolic acid solution, with the remainder of which the vulva is washed for the second time, and any incrustated hairs are, if necessary, removed with the scissors. Contrary to what might be theoretically expected, the injection of dilute carbolic acid into the vagina does not render the parts either rigid or rough, and the finger can scarcely distinguish between their condition before and after the irrigation. After the birth of the child, attention must especially be directed to maintaining a free escape for the lochia. In

the ordinary position of the patient, with the buttocks slightly depressed below the level of the surrounding portion of the mattress, the lowest part of the hollow of the sacrum is lower than the posterior commissure, so that liquid has to collect and rise to a certain level before it can escape outwards. Hence, a greater or smaller quantity will always remain behind if nature be left to herself, and may thus set up decomposition in the secretions which escape from the uterus later on. Moreover, the lochia tend to escape at the upper part of the vulvar aperture, and not at the posterior commissure, owing to the way in which the labia overlap and become adherent to one another, so that a considerable quantity of fluid may be retained in the vagina, and there undergo those changes which are so liable to give rise to septic infection. On these and other considerations Dr. Fritsch finds his method of vaginal and uterine irrigation, which consists in injecting a 2 per cent. solution of carbolic acid (salicylic acid has been found to be too feeble an antiseptic), at a temperature of 88° Fahr., into the generative cavity by means of an irrigator containing at least a litre (two pints) of liquid. The instrument must not be raised higher than one and a-half to two feet above the patient's body, and it may be necessary to use two or three litres of the solution before the liquid returns completely colourless. For the injection of the uterus, Fritsch finds the best form of catheter is one made of German silver, thirty centimetres long and six centimetres in circumference (to be obtained from Baumgartel, of Halle), and which has a curve somewhat greater than the midwifery forceps. In those cases in which there is slight difficulty in introducing the catheter, there is the greatest probability of the retention of fluid in the uterus, owing to kicking from anteversion of the organ. The introduction of the catheter must be invariably controlled by the finger in the vagina. The ordinary dangers which are supposed to result from post-partum digital examination are prevented by the presence of the antiseptic, and the finger is able to detect and to loosen adherent clots, which irrigation alone has not force enough to detach, and which might become sources of putrefaction and infection if allowed to remain. Dr. Fritsch

ordinarily irrigates three times a day, at six, one, and eight o'clock; while the vagina is washed out by the nurse every three hours. While vaginal irrigations should be a *sine qua non* in the after-treatment of every parturient woman, Dr. Fritsch limits the irrigation of the uterus to cases where an operation has been performed, especially where the fetus was dead and decomposed; to cases in which liquor ferri perchloridi has been injected into the uterus to arrest hæmorrhage, and in which the formation of clots is an essential concomitant of the treatment; and lastly, to cases in which fever has existed for several days when the practitioner is called in (as may be the case when the woman has been delivered by a midwife), provided the lochia are still present.

The advantages derived from irrigation under such circumstances may be summed up as follows: 1. After one or two injections the vulvar aperture ceases to be painful and tender, even though it may have undergone considerable laceration; the introduction of the finger becomes painless, œdema rapidly subsides, and wounds heal without the formation of a definite granulating surface. 2. The lochial discharge rapidly diminishes in quantity, the only exception being when irrigation is used after the injection of perchloride of iron into the uterus, their prolongation being here probably dependent on the destructive action of the perchloride on the tissues of the uterus, so that a considerable period must elapse before the whole of the sloughs are thrown off. 3. The uterus undergoes involution quicker than under expectant treatment. 4. *The temperature falls after the first injection.* The influence of irrigation on the pulse is less marked, especially if there has already been severe hæmorrhage or fever of several days' duration. By this method Dr. Fritsch had succeeded in saving severe cases of puerperal fever in which the first injection was made on the fourth to the sixth day after delivery, with a temperature of 40° Cent. (104° Fahr.) or higher; and his experience as assistant for many years in the obstetric clinic at Halle is sufficient guarantee for his statement that these cases were really of the most serious kind. The irrigation of the uterus must be continued for at least five days,

or in any case until the complete cessation of febrile symptoms. As a rule, Dr. Fritsch irrigates the uterus for the last time on the second evening on which the temperature remains normal, but the vaginal injections are continued for another week, as occasionally fetid lochia and a return of fever have been observed when they have been left off too soon. There need be no fear that pain or secondary hæmorrhage will be excited by irrigation; practically, they are not found to occur. The patients themselves have no objection to the treatment, provided the medical attendant explains to them its object. Collapse only occurs where there has been much loss of blood or several days of fever, in such mainly when the liquid has been injected too cold. In carrying out the method much will depend on the tact and care of the medical man. A few spoonfuls of wine may be given before and after the injection. Internally it is well to give quinine. Salicylate of soda in such small doses as two grammes administered in the course of four hours caused so much delirium and collapse in women after child-birth as to deter Dr. Fritsch from repeating its use.

We have entered at some length into the details of the above method because it seems to us to mark a distinct advance in obstetric surgery, and to hold out a real hope of success by taking advantage of a rational indication for the prevention, and even the cure, of puerperal fever, where the use of other remedies has as yet been scarcely more than empirical and unscientific. If the great "peril of child-birth" can be lessened by means so simple, the introduction of antiseptic midwifery will be a boon indeed. The need is pressing, for every year many a young wife and mother is snatched away, the victim of puerperal infection.—(*Med. Times and Gaz.*, Apr. 7, 1877.)—*Monthly Abstract.*

NITRATE OF SILVER IN PRURITUS OF THE VULVA.—Dr. Charles (*Annales de Gynecologie*), speaks most highly of the application of the solid nitrate of silver in the treatment of vulval pruritus. The seat of the itching is oftenest near the clitoris, or in the nymphæ, sometimes at the margin of the anus. It is necessary to cauterize freely, passing the crayon two or three times over the affected surfaces, and even somewhat beyond them. Dr. Charles states that he has found, without a single exception, great relief from the first cauterization, often a complete cure. Sometimes it is necessary to recur to the cauterization a second or third time after some days.

AN AMERICAN VIEW OF OVARIOTOMY AT THE SAMARITAN HOSPITAL, LONDON.

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"All coagula having been carefully removed from the peritoneal surface and pelvic cavity, the clamp was adjusted crosswise externally, and the wound was closed by seven stitches, the pedicle emerging between the last and the last but one. These sutures, like the ligature already described, were of Chinese silk, uncarbonized. They were passed through both the integument and the peritoneum, without, however, taking up the whole thickness of the abdominal wall, and during their tying the loose pouch of the abdomen was bunched up, as it were, by the hand of an assistant. The threads were provided with a needle at each extremity, the second of which was held by the operator's lips while the first was being passed, thus preventing twisting and other entanglement, and permitting greater speed.

"The wound having been closed, bits of lymph were carefully placed under the clamp and between the sutures; the extremity of the pedicle outside the clamp was touched with solid perchloride of iron; the abdomen was covered with cotton-wool, over which were strapped broad bands of adhesive plaster; a binder of flannel was placed outside this; and the entire operation was completed in just half an hour from its commencement.

"Nothing could have exceeded theadroitness and celerity, yet absolute thoroughness and perfect neatness, of the whole procedure. There were two female nurses and two assistant-surgeons, besides the gentleman in charge of the anæsthetic. They were all constantly occupied, and each, knowing exactly what to do, at what moment, and how, never came for a moment into the other's way; so that there were six busy pairs of hands, every one at its especial work. The operation, from beginning to end, was as if done by the most perfect yet sentient mechanism, and was an apt illustration of the consummate skill that only such unequalled practical experience as that of Mr. Wells could produce.

"As to Mr. Wells's percentage of recoveries—in nowise, I believe, depending upon chance

—there is even more to be said. I may hereafter, in another communication, refer to the general subject, having, as is tolerably well known at home, decided views of my own as to the essential points in ovariectomy, so that I will just now confine myself to what was shown at the operation of to-day. There are many questions of interest, as, for instance, whether ovariectomy succeeds better with American or English patients, for the races differ greatly as regards nervous excitability, tolerance of shock, etc.,—but then it must be remembered that Mr. Wells's successive series now represent patients from almost every part of the globe; and as to whether operators are more fortunate in city or in country air. The great bulk of Mr. Wells's sections are made in the very heart of crowded London. What, then, are his secrets? To discover some of them we have but to glance again at what I have just written.

"1. He permits no inoculation with septicæmia by the visitors who are present, no matter if they be intimate friends. They cannot touch the patient's person, much less her mucous membrane by a vaginal examination; and by their written certificate they are put upon their honour that they have not within a week been even within a suspicious atmosphere.

"2. Similarly, precautions are taken against the chance induction of simple peritonitis. By permitting no examination, whether external or internal, by visitors, a deal of unnecessary stirring up of the patient's pelvic and abdominal viscera is avoided. At such times it is but a sorry compliment to a professional friend to ask him to verify the diagnosis, while the abstinence from such manipulation may to the patient make the difference between life and death.

"3. The patient, having been anæsthetised previous to their entrance, sees no stranger. Visitors would instinctively retire at the close of an operation, but they are too often ushered into the room prematurely, thus causing much unnecessary nervous excitement, which most certainly cannot increase the chance of recovery.

"4. Celerity in this operation, provided time enough be allowed for the completion of every requisite stage, and the closure of all points of hæmorrhage, means not *éclat* for the operator so much as safety for the patient, by preventing

undue exposure of her viscera and peritoneum to atmospheric irritation and chill. To insure this, skilled assistants are required, who are not only generally, but specially, versed in every possible detail of the operation.

"5. Every minute precaution, if wise, counts towards the result; so that to confine the patient's extremities beforehand leaves the assistants free for other duties, and preserves the operator from stoppage in his work; saves his mind from annoyance, and his thoughts from being turned from the point of the moment. In the same way, perfect neatness and cleanliness, everything being in its place, and that place a matter not of chance but of prevision, helps the result. Napkins soaked with ascitic and ovarian fluid, sticky sponges, puddles of coagula, and instruments coated with half-dried blood, may seem the necessary adjuncts of such an operation, but their absence goes far to keep the operator's hands facile, his mind cheerful, his speed great, and to cause his whole work to be better done.

"6. Other things being equal, the shorter the incision the better, for manifold reasons. To disintegrate the morbid mass from within its substance by the hand passed into the cavity of a cyst is far more judicious than to pull and to twist and otherwise forcibly undertake to deliver it, whether by hand, by forceps, or by both combined. The adjacent viscera are less disturbed in position and less liable to be bruised, the peritoneum receives infinitely greater protection, and there is less traction upon the pelvic ligaments.

"To the other steps of the operation I need not refer, covering as they do ground that is now more common to surgeons. I used myself to attach great importance to passing the sutures through the peritoneum, as Mr. Wells did in the case now reported, but I have had recoveries when, to decide this question, no suture whatever was used; either the external lips of the wound were simply brought together by adhesive straps, or its internal edges by deep outside pressure of a similar character. And so with regard to the treatment of the pedicle. In this instance it was brought outside, and a stiptic antiseptic applied. Recoveries have so constantly followed not merely this method, especi-

ally known as Mr. Wells's, but deep tying, whether with silk, catgut, or wire, deep acupuncture, the actual cautery, and even other procedures, the comparative merits of which have not been decided, and of which one seems best on one occasion, and another on another, that I do not now discuss them. My aim has been to point out certain general principles, hardly as yet appreciated, which must underlie all constant success; and I am quite sure that in Boston, where the performance of this operation of ovariectomy, perhaps *the* great triumph of modern surgery, was, not many years ago, in Mr. Wells's presence, pronounced 'a mere matter of taste,' my remarks will be appreciated and their justness coincided in."—*Med. Times and Gazette.*

#### RELIEF OF PAIN IN UTERINE CANCER.

Dr. A. E. Aust-Lawrence, Physician to the Bristol General Hospital, writes to the *Medical Times and Gazette*, March 24th:—

I have, unfortunately, generally under my care in hospital and private practice, about from twenty to thirty cases of cancer of the uterus, vagina, or rectum; and the experience of the past twelve months has led me to rely, to a great extent, on the following treatment for the relief of pain:—In cases of medullary cancer of the uterus, and also of advanced epithelioma in the same region, I have been struck with the marked relief often derived from the administration of ergot, in doses of thirty minims every six hours. There is a relief from the intense throbbing which, as a rule, only subsides with each attack of hæmorrhage, which, of course, brings with it great exhaustion. I consider the ergot acts in the ordinary way, by lessening the amount of blood in the uterus; and it may also check, to a slight extent, the rapid breaking down of the affected part. A case of medullary cancer in a young woman thirty-one years of age, was rendered very much less painful by ergot than by any other remedy which was tried. I have a case now under my care of sarcoma of the uterus, the pain of which is very much relieved by full doses of ergot.

Another drug I have found of great value is croton-chloral hydrate. This, in my experience, has not very much power to lessen the pain at the seat of the cancer, but it is very valuable in lessening the reflected pains in the back, thighs, and groins; and this it has done in several of my cases to a very marked degree. As a local remedy I have found carbolic acid very valuable. I apply it, full strength, by means of a little piece of cotton-wool, through a very small speculum, to the cancerous surface, and then order a lotion with one drachm of the glycerini acidi carbolicici to half a pint of water, to be used as an injection night and morning. I have found this drug, used in the way I mention, of great value.

Of course other drugs suggest themselves to every one, such as opium, Indian hemp, bromide of potassium, etc.; but what I wished to show is that ergot is a very valuable agent in helping to control pain in these cases; that locally I have had better results from carbolic acid than from anything else. I might also add that a very valuable way of relieving pain in these cases is by small blisters in the groins, dressed with an ointment containing morphia.

ON A NEW TREATMENT IN POST PARTUM HÆMORRHAGE.—Although not an obstetric practitioner, I have recently been consulted in two cases of severe *post-partum* hæmorrhage. In both cases every means had been adopted but unavailingly. It flashed across my mind in the first case to try the effect of the ether-spray, and accordingly I directed a large spray over the abdominal walls, along the spine and over the genitals; the uterus at once responded, and the cessation of the hæmorrhage was almost immediate. In the second case I lost no time in adopting a similar treatment, and with an equally successful result. I have consulted several eminent obstetric practitioners in Dublin, and am informed by them that they are not aware that this treatment has been heretofore proposed. The advantages of the ether-spray over the application of cold water, and the other means usually adopted in these cases, must be patent to every practitioner of midwifery.—By W. Handsel Griffiths, P.H.D., L.R.C.P.E.—(*Can. Med. and Surg. Journal.*)

## Materia Medica.

### ON THE INTERNAL USE OF GLYCERINE ASSOCIATED WITH CINCHONA AND WITH IRON SALTS.

M. A. Catillon (*Repert. de Pharm.*, June 10, 1876) says that glycerine preserves iodide of iron from the alteration it invariably undergoes by exposure to the air, and M. Vezu takes advantage of this fact in proposing to substitute glycerine for water in the solution (1-2) used in pharmacies for the extemporaneous preparation of the syrup. Hitherto, says the author, no one has, to our knowledge, drawn attention to the remarkable property possessed by glycerine of preventing the action of cinchona bark on iron, and thus of removing the incompatibility of two important agents, which it is so often useful to prescribe together. This property is possessed by glycerine to such an extent that cinchona and the iodide of iron even (perhaps the most susceptible of the iron salts employed in medicine) may be associated without decomposition. It is well known that when iodide of iron is added to the syrup or wine of cinchona the liquid first becomes turbid, and speedily assumes an inky appearance, and there is deposited at the end of some days a blackish powder, which contains the iron as tannate. If the usual liquid be replaced by glycerine, the reaction is not observed, and the two (previously) incompatibles remain mixed without either the limpidity or colour of the cinchona preparation being affected. In addition to this, glycerine exerts on cinchona a solvent power comparable to that of alcohol, and which permits the retention of all its principles. Thus, it dissolves entirely the alcoholic extract, which contains them all, and the complex substance designated resin of cinchona, which contains a notable proportion of them. According to Soubeiran, this resin retains, in combination with the derivatives of cinchotannic acid, known collectively as insoluble cinchona red, a proportion of alkaloid equal in value to one-fourth its weight of sulphate of quinine. The vehicles employed in the ordinary preparations of cinchona precipitate all this active part of the drug.—*Chemist and Druggist.*—*The Dublin Journal of Medical Science.*

## SULPHATE OF CINCHONIDIA IN MALARIA.

*University Hospital, Baltimore.*

During the past ten months sulphate of cinchonidia has been largely used in this hospital in the treatment of malaria. Careful observation of a large number of cases affected with tertian, quotidian, and quartan intermittent fever, shows as decided results from the use of this drug as can be obtained from quinine. The mode of administration has not differed from that of quinine, save the quantity and by hypodermic injection. We have usually given ten-grain doses just previous to the chill, or five-grain doses three times during the day. In case of failure in arresting the paroxysm after the first administration, the dose has been increased to twelve, and even fifteen grains in some instances, with satisfactory results.

In remittent fever our observation has not been so extensive as in the intermittent form. In the few patients suffering from remittent fever to whom it was administered the results were satisfactory.

As an antipyretic it has been employed with less freedom, and with less success.

It has not proved in our experience equal to quinine where the temperature ranges beyond 103°. In the afternoon rise of temperature in phthisis and in pneumonia, with a rise of 102° and 103° temperature, we have employed it with decided benefit. As a general tonic, in three-grain doses, it has acted well.

Its administration has been free from the unpleasant effects so common to quinine. It seldom produces nausea, and is borne well by the stomach after quinine has been refused. The cheapness of the drug, as compared with the cost of quinine, renders its employment freely admissible for dispensary and hospital use, and for impoverished sections of country saturated with malarial poison.—(*Hospital Gazette*).

AMERICAN MEDICAL ASSOCIATION.—The annual meeting of the American Medical Association will be held in Chicago on Tuesday, June 5th, at 11 o'clock, under the presidency of Dr. Henry I. Bowditch, of Boston.

## MIXED CHINCHONA ALKALOID.

The efficiency of this preparation as a substitute for quinine continues to be discussed by the profession in India, and opinion appears to be much divided as to its value as a therapeutic agent. The Government of Bengal has directed its use instead of quinine in gaol and police hospitals, and in native hospitals and district dispensaries. Civil surgeons are also to be supplied with the drug for sale in their districts. The resolution prescribing its use states that these alkaloids appear to be, when judiciously administered, nearly as reliable as quinine, while their cost is only about a-fourth of that of the more expensive agent. On the other hand, in the Madras Presidency the results of a somewhat extended trial of the new preparation have not been satisfactory, and its general adoption is deprecated mainly on the score of its insolubility and its tendency to produce gastric disturbance and vomiting. After reading what has been said for and against the mixed chinchona alkaloid, we are disposed to think that it is deserving of a wider and more thorough trial than it has yet received. There is no reason why its capabilities should not be tested nearer home; the experience thus gained might perhaps be of service to Indian officials.—*London Lancet*.

OPiATINE.—Under the name of opiatine, Messrs. Gale and Co., wholesale chemists, 15, Bouvere Street, Fleet Street, London, E.C., have introduced a preparation, containing a combination of morphia and codeia, freed from the odorous and inert principles—the resin, oil, and impurities of opium—and in which the active constituents are in an uniform, concentrated, and reliable condition. Such a preparation has for the practitioner an obvious advantage. Crude opium and its various extracts are often found to produce much disturbance of the general system. This preparation, on the other hand, does not, it is alleged, cause headache, giddiness, constipation, or other objectionable symptoms characteristic of the ordinary preparations of opium. Nevertheless, it possesses all the soporific, and anodyne properties of opium. Such a preparation has an obviously useful function, and is likely to be welcomed.—*Brit. Med. Journal*.

## Translations.

From *Le Progrès Médical*.

### ON THE THERAPEUTIC EMPLOYMENT OF GLYCERINE.

Glycerine is often employed for external use. The study of its officinal preparations and of its surgical applications has already been accomplished by Demarquay; less often has its internal administration been thought of, as well on account of the impurity of its commercial product, as on account of ignorance of its physiological properties.

Accordingly, we owe it to our readers to draw attention to the interesting researches of M. Chatillon, whose results, already communicated to the *Académie des Sciences*, have just been published in the *Archives de Physiologie*, and have been made the subject of a report by M. C. Paul to the *Société de Thérapeutique*. In small doses, glycerine exerts a real effect upon nutrition, which it increases. This fact is demonstrated by increase of weight. It diminishes disassimilation by furnishing material for respiratory combustion, which, consequently, oxidizes less of the fat in the system. The azotized matters themselves are less rapidly consumed; this fact is established by a diminution in the quantity of urea secreted in the twenty-four hours. Glycerine is an excitant of the digestive functions; it is perfectly tolerated, very rapidly digested, and is so completely absorbed that, unless very large doses are employed, only a small quantity can be found in the blood and urine. Elimination by the kidneys commenced less than an hour after its ingestion and ceases about the fifth hour.

The blood of dogs subjected for a long time to this medication contains less sugar; but it is not on account of this property that glycerine might be advantageously employed in the treatment of diabetes, but rather on account of its preventing excess of organic combustion, and on account of its supplying material to be burnt instead of the tissues of the patient. By itself, glycerine is incapable of producing glycosuria or albuminuria; it possesses laxative properties.

In large doses, glycerine may produce symptoms similar to those of acute alcoholism, if it be introduced all at once into the stomach; but taken little by little, even in excess, it only produces a slight elevation of temperature. The rational dose of glycerine appears to be from 15 to 30 grammes a day; it has already been employed in foreign countries as a succedaneum of cod-liver oil.

From *Le Progrès Médical*.

At a meeting of the "*Société de Chirurgie*," in April, *apropos* of a communication by M. Denuce of two interesting observations of foreign bodies in the air passages, M. Verneuil expressed the hope that M. Denuce's two observations might in some way tend to bring into favour the operation of tracheotomy by the thermo-cautery. The operation is thus made not only much easier, but also much more benign, as well in infants as in adults. M. Tillaux, although altogether partial to tracheotomy by the thermo-cautery, is not so much of an optimist as M. Verneuil, so far as the benignity of the operation is concerned. Some weeks ago he practised tracheotomy on an adult with the thermo-cautery, and he had nevertheless to deal with a considerable hæmorrhage due to section of the thyroidean venous plexus, which had attained a considerable development, as it exceptionally does in some persons.

M. de Saint Germain preferred the history for children, because he had seen a large and deep slough follow the use of the cautery in a child seven years of age.

M. Gillote had done two tracheotomies with the thermo-cautery; in one of the two the hæmostasis was perfect.

M. Paulet also declared himself favourable to this operation. He had experienced a short time since the gravity of hæmorrhages produced by section of the thyroidean plexus with the knife.

M. Despres pleaded the cause of the knife. He charged the thermo-cautery with—1st. Not allowing the operator to know exactly what he was doing; 2nd. Rendering the operation longer; 3rd. Producing sloughs which contain an extent of eight square centimetres. These eschars not only comprise the skin and the



muscles, but invade the trachea itself, and produce constriction of it. Tracheotomy with the knife is, on the contrary, the best regulated operation in surgery, seeing that one ought to determine, as Trousseau did, not to incise the trachea until the bottom of the wound is absolutely dry. Now this is always possible even in children.

M. Verneuil had done, or had allowed his students to do, nine operations; some with the galvano-cautery, some with the thermo-cautery. He had never seen sloughs produced, as mentioned by M. Depres. M. Krishaber had done five operations; M. Mauriac, one. Neither of them had seen any sloughs. As for the operation of M. Labric, it had been done with extreme slowness, as the operator feared hæmorrhages. It was the first time M. Labric had used the instrument. If the division of the tissues had been more rapid, there would have been less radiation, and sloughs would probably not have been produced. As far as the gelatinous œdema, of which M. de Saint Germain had spoken is concerned, everybody knows, and M. de Saint G. amongst the first, that this is often enough observed to follow tracheotomy with the knife.

M. Denuce recently performed tracheotomy with the thermo-cautery in a child seven years of age attacked with croup. There was indeed an eschar found, but of very small dimensions. In any case, this trifling accident ought not to be regarded as a sufficient reason for renouncing an operation which has given excellent results. —E. BRISSAND.

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*From Le Progrès Médical.*

At a late meeting of the "Societe Medicale des Hopitaux," M. Brovardel presented a work intitled, "Urea and the Liver." These researches go to prove a fact of the utmost importance, which is, that the increase of urea in the urine bears relation not to elevation of temperature, but to the functional superactivity of the liver. When the hepatic circulation is exaggerated, the quantity of urea is augmented; when the liver tissue is destroyed, (cirrhosis, malignant icterus, etc.,) the urea disappears or is diminished.

*From Le Progrès Médical.*

At the "Societe de Biologie," M. Dumont-pallier read an interesting report in the name of the Commission appointed, at Dr. Burq's request, to examine into the effects of the application of metals upon the cutaneous surface in cases of anæsthesia. The Commission was composed of Messrs. Charest, Luys, and Dumont-pallier, to whom were added for special researches, Messrs. Landolt, Gelle, and Regnard. They had been able to convince themselves of the correctness of the facts advanced by Dr. Burq. If, in hysterical hemianæsthetics, there be applied upon the hemianæsthetic skins pieces of gold, copper, or zinc, the patient soon experiences prickings, a sensation of heat, and one can discover in this part, at the end of a few minutes, a return of sensibility, an elevation of temperature, and an augmentation of power. In the neighbourhood of the point of application of the metal phenomena of dysæsthesia are also noticed. Special sensibility is affected in the same way. In this way the members of the Commission have been able to observe the disappearance of Daltonism and the diminution of deafness. These remarkable phenomena are not produced in all patients by means of the same metal; in some it is gold alone which is active, in others there exists an idiosyncrasy for copper or for zinc. It is, moreover, probable that this action of the metal is due to the electric currents which it develops on the surface of the skin. Thus, in an idiosyncratic hemianæsthetic return of sensibility would be obtained by employing an electric current of the same force as that indicated by the galvanometer as having been produced after the application of the pieces of gold upon the skin. The same phenomena occur in hemianæsthesia of organic origin; but in these cases, a curious fact, the effects of the metallic application are much more lasting than in hysterical hemianæsthetics. In the course of their experiments, the members of the Commission have established a fact of great physiological importance. In proportion as, on the one side, the general or special sensibility returns, the temperature rises, the muscular force increases, there is observed at a corresponding point on the sound side diminution of sensibility, of temperature, and of muscular power. It seems that one side loses what the other gains; this is a true *transfer of sensibility*.

From the *Revista Medico Quirurgica*.

A NEW MODIFYING AND ANTISEPTIC AGENT  
IN THE TREATMENT OF WOUNDS.

Dr. Hermant has recently published, in the *Archives Medicales Belges*, a note upon the Employment of a Mixture of Chloride of Calcium and Camphorated Alcohol in the Treatment of Wounds.

M. Hermant uses a mixture of equal parts of liquid chloride of calcium and camphorated alcohol, which, after filtration, forms a clear and unchangeable solution. It is especially in wounds complicated by lacerations, contusions, gangrene, and loss of substance, and in fistulous abscesses, that the curative influence of this application of the chloro-alcoholic solution, and the results obtained, have been remarkable. The author also recommends the use of this solution in the treatment of sloughs, occurring in the course of severe typhoid fevers.

In this case, as in all others, the mixture acts, says Dr. Hermant, 1st. As an antiseptic and disinfectant to gangrenous wounds, and, consequently, is advantageously employed in gun-shot wounds.

2nd. As a detergent, possessing an eliminative action on mortifying tissues, which it causes to disappear by a kind of insensible absorption, and almost without suppuration.

3rd. As a cicatrizant, it exerts a constrictive (constringent) effect upon wounds, which promotes the approximation of their edges.

These results should be confirmed by experiment. In a case of cancerous ulceration we made use of this mixture as a disinfectant, and we are bound to say that it seemed to us to be very useful. It appeared to us, in this respect, (as a disinfectant) much superior to the various disinfectants having carbolic acid, (whose odour is to some very disagreeable,) for their active principle. The chloro-alcoholic solution is free from this inconvenience.—Extract from the *Presse Med. Belge*.

From the *Gazzetta Medica Italiana*.

PETROLEUM AS A TOPICAL APPLICATION.

Dr. Paolo Comegiji recommends the use of common petroleum as a topical application in cases of chronic ulcers, sacral sloughs, and

affections of bones. According to the experience of the author, injections of petroleum into sinuses, and into purulent cavities, are attended with marked advantages. Where loss of substance has occurred, he applies strips of cotton soaked in petroleum, and then covers the whole with a piece of oiled silk. According to the author, the pain produced by this application disappears at the end of a few minutes.—From *Giom. della R. Accad. di Med. di Torino*.

From the *Revista Medico Quirurgica*.

SUBCUTANEOUS INJECTIONS OF THE BROM-  
HYDRATE OF QUININE.

Dr. Herbillon has studied the properties of this new combination of quinine, discovered by Latour in 1870, and first applied in therapeutics by Professor Gubler. This salt especially is employed in subcutaneous injections. Here is the formula of the solutions:—

Neutral bromhydrate of quinine.	1 gramme.
Distilled water .....	6 cent. cwt.
Alcohol .....	4 “

This solution is one in one-tenth; one gramme of the solution, that is to say, the mean capacity of a Pravaz syringe will contain ten centigrammes of the bromhydrate of quinine. Ten to twenty centigrammes of the active substance are injected daily. To the already published observations of Messrs. Soulez and Gubler, Dr. Herbillon adds other facts in the M. Gubler's wards in the hospital Beaujon; and signals the advantages to be obtained from the employment of this salt in the treatment of intermittent fevers. Dr. Raymond has also observed in M. Gubler's wards the good effects of this salt, and publishes five very conclusive observations demonstrating the security and rapidity of action of this substance. He insists, moreover, upon the innocuity of the hypodermic injections. In 300 injections practised in M. Gubler's wards, he has never observed a single accident. For his part, Dr. Soulez has shown the safety of these injections; out of 116 hypodermic injections made by him, he has not seen eschars produced by these injections more than ten times. Amongst these cases he has treated patients suffering from

severe affections (typhoid fever, consumption). Moreover, Dr. Soulez prescribes (directs) the employment of this method in patients profoundly cachectic. Dr. Cheffe has obtained, in Algeria, from the bromhydrate of quinine, given internally, successful results in more than thirty cases of intermittent fever, by the daily administration of a single dose of ten centigrammes of the salt.—*Journal de Therap.*

From the *Revista Medico Quirurgica*.

#### HYDROTHERAPY IN SYPHILIS.

The time has arrived for practitioners to recognize the utility of stimulating and promoting nutrition in the treatment of syphilis. It is a manifestation of this general tendency, the combination of hydrotherapy with mercurial medication, which constitutes the treatment recommended by a distinguished German syphilographer, Dr. Hofmeister, of Pest. From his experience he concludes:—

1. The employment of cold water in syphilis notably increases the general nutrition.
2. The increased energy of digestion facilitates the absorption of alimentary substances and medicines.
3. The preferable mode of administration of mercury is by inunction.
4. Cold water, by promoting absorption, necessitates a smaller quantity of mercury.
5. The augmented activity of the secretory organs prevents the accumulation of mercury in the system.
6. The duration of treatment is much shorter than under ordinary circumstances.
7. Segregation of the patients is not necessary, because the cold water represses their ardour.

And 8th. Salivation does not occur, and it is not necessary to suspend the treatment.—*Revista de Medicina le Cerujia Practicas*.

#### THREE CASES OF SUB-CORACOID LUXATION OF THE HUMERUS REDUCED BY THE METHOD OF PROFESSOR KOCHER, OF BERNE.

The following is the description of the method given by the author: "Mrs. J. having seated herself in front of me, the dislocated arm being semi flexed, I seized with my left

hand the wrist, and with my right, the elbow of the dislocated arm; then I rotated the limb outwards until I felt decided resistance; next, without removing my hands, I pressed with the right hand on the elbow from below upwards; then rotating inwards, I brought the limb towards the chest and the hand of the luxated arm to the opposite shoulder. During this last movement I heard the head of the humerus slip into its place." This method of reduction has great advantages, as it can be used without the aid of chloroform.—(*Revue de Therapeutique Medico-Chirurgicale*).—*L'Union Medicale du Canada*.

From *Le Progres Medical*.

At a meeting of the Surgical Society of Paris, on April 25th, M. Verneuil described a new method, invented by M. Miniere, a medical student, for the purpose of preventing nocturnal erections and the spermatorrhœa which result therefrom. This apparatus, which has been called the electro-medical alarm, is composed of an electric clockwork, in which two conducting wires end. These wires start from a light ring, divided into two parts by a slight moveable septum. The penis is placed beneath this septum, and, if an erection commences, the septum is raised, and completes the circuit. The alarm bell, thus started, awakes the patient in time for him to avoid the erection. A patient, troubled with erections for fourteen years, has been completely cured by this instrument.

From *Union Medicale et Scientifique du Nord-Est*.

M. Jolicœur, at a meeting of the Medical Society of Rheims, described the following method of preparing specimens of tœnia for examination: "The segments of the worm are, as soon as possible after their expulsion, put into a mixture of vinegar, water and alcohol for a fortnight. They thus become so transparent that by placing them on a glass slide, and holding them up to the light, their structure, and especially the disposition of their organs of generation, can be clearly seen.

THE CANADIAN  
Journal of Medical Science,

A Monthly Journal of British and Foreign Medical  
Science, Criticism, and News.

TO CORRESPONDENTS.—*We shall be glad to receive from our friends everywhere, current medical news of general interest. Secretaries of County or Territorial medical associations will oblige by sending their addresses to the corresponding editor.*

TORONTO, JUNE, 1877.

☞ SUBSCRIBERS' DUES.—Will those who are indebted to us for the past and current year kindly forward their subscriptions. Many are yet in arrears.

UNIVERSITY SENATE.

The election of members for the Senate of the University of Toronto resulted in the return of the three retiring members: Dr. Oldright, Judge Boyd, and Mr. W. Mulock, by the following vote:—Dr. Oldright, 431; Judge Boyd, 413; Mr. Mulock, 405; and Dr. Fulton, 157; Mr. A. McMurchy being chosen by a large majority as the representative of the High School masters. The above vote indicates clearly the feeling of the graduates in regard to the late agitation, and constitutes a pleasing endorsement of the acts of those gentlemen who have been so severely censured.

If there had been the least grounds for supposing the Senate had been recreant to its trust, or had shown the slightest disposition to prostitute the University to the accomplishment of narrow, selfish ends, the varied, energetic, persistent, and *very peculiar* efforts made to arouse a feeling of jealousy in the minds of the graduates towards their representatives should at least have reduced their majorities below those of their previous election; whereas, instead of doing this, the agitation brought out the whole strength of the constituency, and the retiring members were elected by larger majorities and numbers, we are told, than had ever been cast at any previous election, thus giving them a most triumphant vindication of their course and conduct.

Some of our friends wonder why we have not taken a more active part in the contest, or expressed our views and preferences in regard to the candidates. Knowing that the electors were not like those of a municipal or parliamentary constituency, but intelligent, educated, thinking men, capable of forming their own judgments, we felt that the issue could be safely left in their hands without dictation or importunity on our part; and as the canvas was being conducted we knew that if we took any part in the contest it would result in a controversy more or less personal and embittering, in no way conducive to the elevation of the profession, or the advancement of brotherly love.

THE REGISTRAR'S OFFICE.

We are told that the office of the Registrar of the College of Physicians and Surgeons has been moved from the Mechanics' Institute building, Church Street, up to the Old Asylum building in the Queen's Park, more than a mile farther from all business centres in the city than it was before. Certainly if it was difficult for persons to have their business with the Registrar attended to before, it will not be easier now.

UNIVERSITY CONVOCATION.—The day for the Convocation of the Graduates of the University of Toronto is close at hand. We hope that the attendance will be large. There are a great many points which might profitably be discussed, and we are sure that the representatives elected to the Senate would be glad to hear the opinions of their constituents. We have before urged the importance of reform in the Medical curriculum, and we know that all who have taken any interest in the matter are of one mind as to the necessity of establishing compulsory annual examinations in the Faculty of Medicine. There has already been submitted to the Senate, by a committee thereof, a strong and unanimous recommendation on this point, but there the matter has been allowed to rest. We think, too, that all will agree with us that the standard in many of the important branches of medicine is far too low.

**THE DISCOVERER OF ANÆSTHESIA.**—In the *Virginia Medical Monthly* for May, Dr. Marion Sims has an article on this subject, and, after careful investigation, decides that to Dr. Crawford W. Long, of Athens, Georgia, is due the honour of first discovering and practising anæsthesia. Dr. Long used ether on the 30th of March, 1842, and, by its aid, painlessly removed a tumor from the neck of a patient. This was two years before Morton used nitrous oxide, and four years before Wells used ether. Dr. Long is still living, and his claims are fortified by the evidence of other physicians who were present at the operation, and by the written statement of the patient operated upon. Dr. Sims urges the American Medical Association and the profession everywhere throughout the States, to petition Congress to make a grant of one hundred thousand dollars each to the families of Morton, Wells, Jackson, and Long, as a small recognition of the boon conferred upon mankind by them.

**ANIMAL VACCINE VIRUS.**—We have received some animal vaccine points from Dr. E. L. Griffin, of Fond-du-Lac, Wisconsin, and have given them a thorough trial. We can highly recommend them, as in no instance in our experience have they failed, and in no case has any ill effect resulted from their use. Dr. Griffin's advertisement will be found in another column.

**HONOURS TO A CANADIAN.**—We are pleased to hear that Dr. A. R. Robinson, graduate of Toronto University, has been awarded a prize of \$100 by the Bellevue Hospital Medical College Alumni Association for the best essay on medicine. This prize is open for competition to all graduates of the College. Dr. Robinson graduated in 1869, and has for some time been practising in New York.

**JOURNALISTIC.**—The *Maryland Medical Journal*, edited by Drs. Manning and Ashby, of Baltimore, and the *Hospital Gazette*, edited by Frederick A. Lyons, M.A., M.D., New York, are two new medical monthlies aspiring for favour.

**UNIVERSITY OF TORONTO, ELECTION TO THE SENATE.**—The three retiring members for this year, Wm. Oldright, M.A., M.D., John Boyd, M.A., B.C.L., and William Mulock, M.A., have been re-elected by the large majorities of 284, 256, and 258 votes respectively. A. McMurchy, M.A., has been re-elected by the High School teachers.

#### BOOKS AND PAMPHLETS.

*Proposed Bill to Amend the Present Anatomy Act.* This Bill is to be submitted to the Ontario Medical Council at its next meeting in June.

*An Act to Amend and Consolidate the Acts Relating to the Profession of Medicine and Surgery in the Province of Quebec.*

*On the Nomenclature and Classification of Diseases of the Skin.* By L. DUNCAN BULKLEY, A.M., M.D. New York: G. P. Putnam's Sons.

*Two Cases of Morphœa, with Remarks on the Disease and its Differential Diagnosis.* By L. DUNCAN BULKLEY, A.M., M.D. New York: G. P. Putnam's Sons.

A public reception was tendered to Dr. Oronhyatekha and the distinguished temperance representatives who accompanied him from England, in the Morrell Temple lodge room, London, Ont. Addresses were delivered by the doctor, Mr. R. McDougall, Town Councillor of Liverpool and President of the United Temperance Association; Rev. R. Patterson, G.W.C.T., of Belfast; and Mr. W. Jones, G.W.C.T., of Birmingham.

The annual meeting of the College of Physicians and Surgeons of Lower Canada took place on Wednesday, in the Natural History Society's rooms, Montreal. The attendance was very large, and many of the members of the profession outside of the College were present. The meeting was chiefly devoted to a discussion on the present Medical Act.

### Miscellaneous.

AMERICAN GYNÆCOLOGICAL SOCIETY. — The second annual meeting of this society will be held in Boston on May 30. The annual address will be read by the President, Dr. Fordyce Barker, of New York.

At a meeting of the Surgical Society of Ireland, held last week, Mr. Rawdon Macnamara exhibited a specimen of calculus which he had removed from a child aged four years, and which weighed a-quarter of an ounce—a most unusual size in a patient at so early an age.

UNIVERSITY OF TORONTO DEGREE OF M.D.—The following gentlemen, Bachelors of Medicine of the University of Toronto, have qualified themselves for the degree of M.D.:—T. S. Covernton, of Hamilton Asylum; James White, M.A., Hamilton Hospital; W. J. Wilson, Paisley; and R. Zimmerman, Toronto.

CANADIANS IN ENGLAND.—F. R. Eccles, M.D., of Warwick, Ontario; Richard L. Macdonnell, M.D., of Montreal; Alex. Munro, M.D., of Montreal; John H. Henchey, M.D., of Quebec; and Adam H. Wright, B.A. M.B., of Toronto, have been admitted members of the Royal College of Surgeons, London.

The Annual Meeting of "The Association of American Medical Editors" will be held at the Palmer House, Chicago, on Monday evening, June 4th, 1877, at 7.30 o'clock.

All Medical Editors are eligible for membership, and are cordially requested to be present and participate in the meeting.

F. H. DAVIS, *Secretary*.

RESIGNATIONS IN THE PHILADELPHIA MEDICAL SCHOOLS.—Dr. Francis G. Smith has resigned the professorship of the Institutes of Medicine in the University of Pennsylvania, and Dr. B. Howard Rand that of chemistry in the Jefferson Medical College. We understand that the vacancies thus created will not be filled immediately, so that time may be afforded to gentlemen who desire to become candidates to make known their qualifications.

The law officers of the Crown—so it is said—have given it as their opinion that although women can be admitted to the degrees in medicine at the University of London, they cannot become members of Convocation. The latter is legally a part of the governing body of the University, and the Enabling Act of last year, under which women can be admitted to degrees in medicine, does not permit them to become members of the governing body of a medical corporation.

The *Thunder Bay Sentinel*, April 26th, says,—"Over a year since we published a series of articles, and also communications from Drs. Jno. Clarke and Cooke, urging the establishment of an hospital here, especially in view of the Public Works going on. Nothing was done, and now the want is surely felt. Men are frequently brought down the line and made a heavy charge upon citizens often poorly able to suffer the expense. This is not right, and a common humanity urges that immediate steps for relief be taken."

METHOD OF ESTIMATING UREA.—At a meeting of the Medical Society of the College of Physicians, Ireland, held last week, Professor Emerson Reynolds demonstrated a ready method of clinically estimating the quantity of urea in urine. In the apparatus, which is very simple, to a given quantity of urine mixed with water, the hypobromide of soda is added, and the water displaced by the volume of nitrogen given off indicates the amount of urea present in the specimen examined; every six and a-half drachms of water discharged being equivalent to one grain of urea.

ROYAL COLLEGE OF PHYSICIANS, LONDON.—"Any candidate for the College license who shall have obtained a degree in medicine or surgery at either a British, colonial, or foreign university recognized by the College, after a course of study and an examination satisfactory to the College, shall be exempt from re-examination on such subjects as the Censors' Board shall in each case consider unnecessary." The by-law was not accepted, we believe, without opposition, on various grounds; and it is not improbable

that that opposition will be renewed when the by-law comes before the College for the second time. [The by-law has been read a second time and passed.]

At the "Societe de Biologie," on 7th of April, M. Redon gave the society an analysis of his thesis upon saccharine diabetes in the infant. More frequent than is generally believed, the affection presents at this age some interesting peculiarities. Amongst the number of symptoms almost constantly found are polyphagia, polyuria, and dryness of the skin. The prognosis is very grave (twenty-two deaths out of thirty-two cases). The fatal termination is less often due to phthisis than to marasmic phenomena. It is, moreover, more important to remember the possibility of diabetes in the infant, since the rational treatment appears to have a very great influence upon the course of the disease.

**NOCTURNAL CRAMP.**—A Member writes:—I am very glad to find that J. E. C., M.D., has found some benefit from Howard's bicarbonate of soda. He has lain many nights studying cramp in his own person. It proceeds, he says, from excessive acidity, not only of the stomach but of the whole bowel track; and when it seems to have reached its height, the extensor tendons have nearly dislocated the great toe. Then it is that relief is at once obtained by taking half a drachm to two drachms of the soda. Before he found this remedy useful, many things had been tried. In less than thirty seconds the cramp disappears, leaving a soreness that soon passes away. It has been prescribed by him in numerous cases, and the result has been always satisfactory.—*Brit. Med. Journal.*

**ORIGIN OF URIC ACID AND UREA.**—Dr. W. von Kniერიem (*Zeitschrift für Biologie*, Band xiii., Heft 1, 1877), from the results he has obtained in a long series of experiments upon the relations of the antecedents of urea in mammals to the organism of birds, draws the following conclusions:—1. During the digestion of protein compounds in the organism of the

fowl the same bodies are formed as in the digestion of the proteids in mammals—namely, asparaginic acid, leucin, glycocoll; and these substances constitute the antecedent stages of the formation of uric acid. 2. The antecedent stages of uric acid of the products of decomposition of the protein compounds in mammals, are, with the exception of the salts of ammonia, the same as those which precede the formation of urea. 3. Ammonia salts, which are converted in the bodies of mammals into urea, are eliminated from the bodies of fowls in an unaltered condition, and this explains the much larger excretion of ammonia that takes place in birds as compared with mammals.

**UNIVERSITY OF TORONTO MEDICAL EXAMINATIONS.**—At the recent examinations of the Toronto University in the Department of Medicine, thirty-three candidates went up for M.B., and twenty-nine passed, viz.:—J. P. Armour, R. H. Barkwell, C. E. Carthew, A. Davidson, J. J. Esmond, B. Field, D. M. Fisher, J. W. Good, G. Gordon, W. J. Gracey, A. Grant, G. A. Langstaff, M. Macklin, W. A. Munro, G. T. McKeough, A. H. McKinnon, R. B. Orr, W. T. Parke, N. D. Richards, J. A. Sinclair, J. B. Smith, D. A. Stewart, W. T. Stuart, M. Sutton, W. Tisdale, F. B. Wilkinson. T. H. Wilson, W. E. Winskell, and O. Young. The following were the successful medalists:—University gold medal, W. T. Stuart; University silver medal, (1) R. B. Orr; (2) N. D. Richards; Starr gold medal, W. T. Stuart. For the Primary examination twenty-nine went up, of whom twenty-eight passed, viz.:—J. Algie, A. Baines, W. H. Bentley, S. A. Cornell, W. Cornell, W. H. Doupe, H. A. De Lorn, A. G. Geikie, S. H. Glasgow, J. Groves, J. R. Jones, W. Lehman, R. P. Mills, D. McCarthy, T. J. McCort, J. McGraw, J. J. McIlhargey, W. McKay, R. A. Pyne, J. P. Rankin, G. Riddell, A. Robinson, J. W. Ross, U. M. Stanley, M. Stalker, J. E. Vanderburgh, A. Wilson, and D. H. Wilson. The 3rd year scholarship was won by H. S. Griffin; the 2nd year's by J. Adair, and the 1st year's by W. Cross.

A meeting of the St. Clair Medical Association was held in the Crawford House, Windsor, on Wednesday, May 9th. The following members were present:—Dr. McLean, Sarnia, President; Drs. Casgrain, Fleming, Pousette, and Thompson, Vice-Presidents; Dr. Tye, Treasurer; Dr. Holmes, Chatham, Secretary. The other medical gentlemen present were:—Dr. Bucke, Superintendent of the Lunatic Asylum, London; Dr. Fraser, of Sarnia; Dr. Martin, Sandwich; Dr. Gaboury, Windsor; Dr. Lambert, Windsor; Dr. Bray, Chatham; Dr. Abbott, Dr. Brett, Dr. Gaboury, Belle River; Dr. McKeough, Dr. Siverwright, Dr. Van Allen, Chatham; and Dr. Carney, of Windsor. Drs. Lister and Shirley, of Detroit, were also present. Dr. Lambert read a paper on "Thoracentesis;" and Dr. Fraser, of Sarnia, a paper on the "Therapeutic Value of Alcohol." Quite an interesting discussion took place on these papers. The President returned thanks to the medical gentlemen of Windsor for the kindness extended to the Association, which was acknowledged by Dr. Casgrain, Vice-President. The Association then adjourned, to meet in Sarnia the first week in August.

**DEATH WHILE UNDER THE EFFECTS OF NITROUS OXIDE.**—It is with great regret that we have to announce the death of Mr. Geo. Morley Harrison, which took place at Manchester on the 27th ultimo, while under the influence of nitrous oxide gas. It appears that Mr. Harrison was suffering from toothache, and late in the evening he went to Mr. E. H. Williams, a dentist, who lived next door, to have some teeth extracted. Mr. Harrison asked to have some nitrous oxide administered, and the first administration not proving sufficient, he asked Mr. Williams to allow him to inhale the gas till he snored. Immediately after the extraction of the teeth symptoms of syncope ensued, and death was the result. An inquest was held, and the jury returned the following verdict: "Died from syncope during the administration of nitrous oxide gas for the extraction of teeth whilst labouring under fatty degeneration of the heart."—*London Lancet*.

**NEW TEST FOR BLOOD.**—At a late meeting of the Academie des Sciences at Paris (March 5th, 1877), M. L. Cazeneuve brought forward a new test for blood, which may, perhaps, be of importance in medico-legal investigations, and which consists in observing the action of hydrosulphite of soda on the hæmatosine of the blood. He makes with boiling distilled water and a little ammonia an alkaline solution of ammonia. This solution is placed in a vessel adapted for spectroscopic examination. The characteristic band of alkaline solutions of hæmatosine is then seen to be present. If now a drop or two of the solution of the hydrosulphite is added to this liquid the dichroic tint of the alkaline solution instantaneously disappears, and is replaced by a crimson (rougevermeil) tint, which closely resembles the colour of a solution of oxyhæmoglobin.

**EXPULSION OF THREE ASCARIDES LUMBRICOIDES BY THE MEATUS URINARIUS** (*La France Médicale*, 1876, p. 107; from *Nuova Liguria Medica*).—A patient who had shown previous symptoms of worms was seized with severe pains in the anoperineal region, with throbbing and weight, followed by the appearance of piles, to which he was subject. At the same time he experienced a sensation of titillation at the neck of the bladder, which soon changed to a burning feeling and extended along the urethra to the meatus. Debility, dejection, occasional headache, and disturbance of the intellectual faculties, particularly of the memory, were present. Tem. 102°, respiration 38, pulse 100. Rectal and vesical tenesmus. One day, when the patient was more inconvenienced than usual by these symptoms, he passed a lumbricoid ascaris eight centimetres (two and a-half inches) in length by the urethra. Subsequently two other worms were voided, one of which was twelve centimeters (nearly four inches) in length. The treatment was tonic, with alkalies for the intestinal catarrh and urethral injections with decoction of male fern. It is supposed that these worms penetrated the bladder after leaving the small intestine, which had descended into the pelvic cavity and was interposed between the rectum and the base of the bladder.—*Phil. Med. Times*.



CYANIDE OF ZINC IN RHEUMATISMAL NEURALGIA.—Dr. Luton, of Rheims (*Bull. Gen. de Therap.*, 1877, p. 97) again calls attention to the value of the cyanides in the treatment of rheumatism. He gives notes of two cases, one of sciatica followed by trifacial neuralgia and delirium, where the remedy was administered according to the following formula :

R Zinci cyanid., gr. iiii ;  
Aq. destillatæ, fʒviii ;  
Mucilag. acaciæ ad fʒiv.—M.

Sig.—Tablespoonful every hour. *Shake well before using.*

The effect produced was surprising. The patient suffered less the first day after commencing treatment, the accompanying fever abated, the pain became tolerable, sleep and appetite returned. Within three days the disease was cured, and did not return. A second case of trifacial neuralgia, accompanied by acute articular rheumatism, fever, cerebral trouble, was cured rapidly by the same means. Dr. Luton gives notes of both of these cases. In the remarks which follow, he takes occasion to complain of the unmerited neglect with which this remedy has been treated by the profession, and complains almost bitterly of the popularity of propylamine and salicylic acid. Against the latter, indeed, Dr. Luton inveighs as a simple disinfectant elevated all at once by blind empiricism to the dignity of an anti-rheumatic remedy. He also considers the cyanide of zinc to have been employed heretofore in too small doses. If three, four, or four and a-half grains are necessary to master the disease, let them be given, but in broken doses, so that elimination may proceed *pari passu* with absorption. The cyanides are transient in their effects: they only pass through the organism, like chloroform, chloral, ether, etc. Hence there is no cumulative effect to be dreaded. Reduced rapidly to the condition of hydrocyanic acid, they are exhaled by the respiratory passages. Dr. Luton does not consider three-quarters of a grain of cyanide of potassium or zinc every hour excessive, and asserts that no risk is run in the administration of this dose. He prescribes it either in pill form or in the mixture above given.—*Phil. Med. Times.*

HASKET DERBY, M.D., who recently examined the eyes of 122 members of the Freshman class of Harvard College, has presented the results in a compact report to President Eliot. The percentage of near-sight corresponds with that obtained by Dr. Cornelius A. Agnew in the collegiate department of the Brooklyn Polytechnic and the introductory department of the New York College, and also with that obtained at Amherst College by Dr. Derby himself. This percentage is 29.5. The examinations are to be repeated from year to year until the class is graduated, and the figures will illustrate the development of myopia during a college course. The examinations conducted in the schools of Breslau, Vienna, Lucerne, and St. Petersburg, as well as the partial tests made in Cincinnati, Brooklyn, and New York, indicate that myopia is not congenital, but increases steadily under the pressure of study. These conclusions are the same which Dr. Howe has reached after examining the eyes of 1,000 school children in Buffalo. He did not find a single child under six years that was near-sighted, which proves that the disease itself is not inherited, although the tendency may be; but between the ages of six and eighteen the percentage rapidly increased, his conclusion being that one pupil out of every four who is graduated at a high school is made near-sighted for life.

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#### APPOINTMENTS.

Francis Lucas Nesbitt, Esq., M.D., of the village of Aurora, to be an Associate Coroner in and for the County of York.

The appointment of Francis Lucas Nesbitt, M.D., formerly of Angus, as an Associate Coroner in and for the County of Simcoe has been cancelled.

Elias Vernon, of the city of Hamilton, Esq., M.D., to be an Associate Coroner in and for the County of Wentworth.

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CANADIANS IN ENGLAND.—Alexander Munro, M.D., Montreal, has been admitted Licentiate of the Royal College of Physicians, London.

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## Births, Marriages, and Deaths.

### BIRTHS.

At Bowmanville, on the 5th inst., the wife of Dr. Boyle, of a daughter, premature birth.

At Florence, on Tuesday, the 8th May, 1877, the wife of James A. Sivewright, M.D., of a son.

In Bowmanville, on the 30th April, the wife of Dr. Beith of a daughter.

### MARRIAGES.

At Knox Church, Toronto, on the evening of the 22nd inst., by the Rev. Dr. Topp, James Buntin Boyd, to Annie Isabella, eldest daughter of James Ross, M.D., Sherbourne Street.

At Ashton Farm, East Whitby, on April 25th, by the Rev. Conrad Vandusen, Adolphus Farewell, M.D., of Glanford, to Laura Georgina, eldest daughter of Samuel Beall, Esq.

At St. Mary's Church, Owen Sound, on the 9th inst., by the Rev. Father Granotier, E. O'Neil, M.D., of Hamilton, to Mary W., eldest daughter of Mr. Geo. Spencer, Owen Sound.

On the 16th inst., by the father of the bride, assisted by the Revs. W. H. Hughson, P. E., of London District, and A. L. Russel, M.A., B.D., at the residence of the bride's father, Henry McCrea, M.D., of Marlette, Michigan, U.S., formerly of Ontario, to Miss A. E. McLean, eldest daughter of the Rev. J. McLean, of Mount Brydges.

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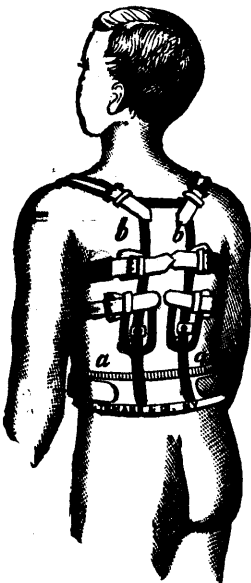
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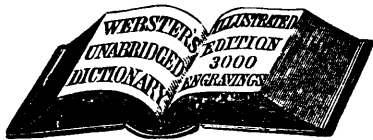
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Nickel sulphate.....	.162	Ammonium sulphate.....	.022
Cobalt sulphate.....	.014	Sodium chloride.....	.326
Manganese sulphate.....	.257	Calcium fluoride.....	trace.
Copper sulphate.....	.008	Calcium phosphate.....	trace.
Zinc sulphate.....	.301	Silica.....	1.504
Magnesium sulphate.....	16.006	Organic matter.....	.123
Strontium sulphate.....	trace.	Water.....	42.988
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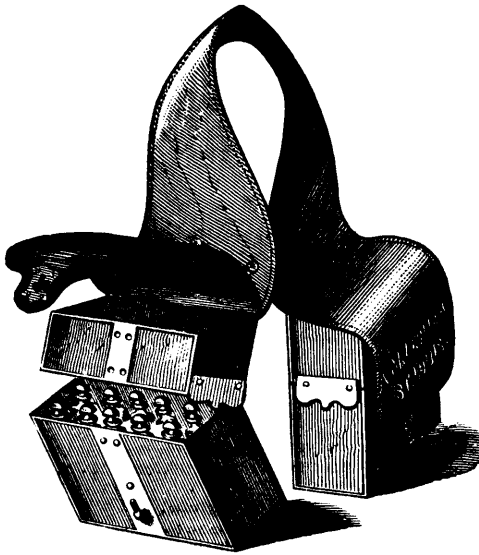
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