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THE PROGNOSTIC SIGNIFICANCE OF
MODERATE CARDIAC HYPERTROPHY AND DILATATION.*

BY DR. CHAS. SHEARD.

I have chosen for the subject of this address "The Prognostic Significance of Moderate Cardiac Hypertrophy and Dilatation," in the hope of eliciting a discussion on the prognosis in cases of slight lesion of the heart, for often great stress is laid upon the discovery of a slight murmur, or upon the character of the murmur, while the existing condition of the heart is either overlooked altogether or treated as of secondary importance, and the patient, sometimes without cause, is left to conjure up all the evils conveyed to the layman in that dread expression "heart disease." Let us first understand what conditions result from incompetency, or from imperfect action of the heart's valves. I would at the outset lay down the principle that cardiac murmurs are only symptoms, sometimes unreliable, of interference with the functions of the valves, and not proof of cardiac disease. I presume there are none here who cannot call to mind cases where a murmur existed for years, and the patient either did not know of it, or never felt any effects sufficient to complain of. The conditions of the heart as a whole, and the symptoms resulting from its altered condition, are the true indications.

* Read before the Ontario Medical Association.

The conditions which attend any interference in the proper action of the cardiac valves are

1. Distention of the cavity from which the blood is passing.
2. As a result of the continued distention, hypertrophy of the muscular walls of that cavity.
3. Dilatation or thinning of these walls when the increased development of muscle can no longer be maintained.

Each of these conditions are pathological, and may produce in themselves serious irregularity of action, or serious cardiac symptoms, or even death. It is quite possible for sudden swelling of the mitral valves to be productive of such distention of the left auricle that severe and fatal dyspnoea (from direct pressure upon the pulmonary veins) may result, and in invasion of the aortic valves there are often seen as the direct results of ventricular distention paralysis of the heart's systole. Here death occurs before hypertrophy has had time to occur and without dilatation, and in acute inflammatory changes causing either marked irregularities in the heart's rhythm, or sudden death. No doubt this is the true explanation.

These acute conditions are comparatively rare. Oftener is the practitioner called upon to determine the significance of a slight mitral or aortic murmur. He is asked, or asks himself, Is it of serious import? I do not refer to hæmic murmurs, but to those only which bear the geographical limitations, marking either regurgitation or obstruction, and a correct

opinion as to the significance of such a murmur, can only be arrived at by ascertaining

1. The length of time such has existed.
2. Its effects.

A murmur discovered in the course of an acute illness, and unattended by local or general œdema, dyspnoea, or irregularity of the heart's rhythm, or any evidence of interference with the heart's action, can be of little significance and would be better, in the interest of our patient, passed by unnoticed. How many cases can be recalled where such a discovery was made by too good an auscultator, and for the balance of life the patient was haunted by its shadow?

Murmurs, I believe, are often due to deposit on the valve of such a character or in such position as in no way to interfere with its proper closure.

After a severe lesion of a valve has occurred, and which is going to prove serious in from three to ten months, it will evince its serious nature in evidences of cardiac hypertrophy, such evidence being found in a full and strong pulse, throbbing temporal arteries, attacks of giddiness, palpitation, especially in connection with exertion, or sometimes even at rest, as after retiring to bed. These symptoms cause the patient to seek advice from his physician, and on physical examination of the cardiac region the heart's apex will be found to be displaced downwards, and the area of cardiac dulness will be increased either to the right or left, depending materially upon the form of valvular lesion and the cavity most involved in the obstruction. The rapidity with which hypertrophy progresses depends to a great extent upon the temperament and occupation of the patient. In those of a nervous and excitable disposition it will, of course, increase rapidly, as well as in those whose occupation requires of them much muscular effort or who incline to athletic exercises.

It must also not be forgotten that many occupations which are sedentary may not be sedentary so far as the heart is concerned, as they may involve great mental excitement, or consist of a series of nervous shocks which tell in a most prejudicial manner upon the heart.

Apart from aortic disease, slight cardiac hypertrophy in one of middle life cannot be regarded as a very serious condition, unless in

one whose occupation exposes him to its rapid increase. We, however, ought never to omit to carefully regard the arterioles and capillary system in estimating the significance of cardiac hypertrophy. If there be any tendency to occlusion or plugging of the smaller vessels, as exists in sclerosis of various organs, or if the vessels show indications of atheromatous change they are less able to withstand any increased pressure put upon them by the heart.

In aortic regurgitation cardiac hypertrophy has certainly a much greater significance than in lesion of any other valve. I will not discuss the point as to whether the coronary arteries are filled during the ventricular systole or during the diastole, but assert my belief that where the aortic valves are involved in such disease as to lead to regurgitation the degree of hypertrophy of the left ventricle is never as great, and is much sooner followed by dilatation than in disease of any other orifice; and further, there is greater liability to a sudden cessation of the ventricular systole in such lesions than in any other.

I believe that interference with the nutrition of the heart, and consequent interference with the hypertrophic development of heart muscle to a great extent explains this.

In permanent aortic obstruction the usual cause is to be found in one or more vegetations which oppose the egress of blood from the left ventricle, and inasmuch as such vegetations are most numerous upon the ventricular side of the semilunar valves, and often involve the free edges of these valves, they are apt to cause regurgitation together with obstruction, a common condition in aortic lesions, and bearing a doubly prejudicial influence upon the ventricle when such conditions exist. The period during which hypertrophy is going on will be materially shortened, and the liability to sudden distention of the left ventricle greatly increased.

We must never forget the force of the elastic recoil of the aorta, a force which has been shown by Gaskell to be in itself sufficient to propel the blood along through the finest capillaries, and in the event of there being an incompetent aortic valve to withstand this force it is plain the pressure will throw the blood back again into the ventricle. In cases of sudden death from aortic disease, and known by the complex

term of aortic incompetency, this is the method by which the heart's action becomes arrested, and such may, and is apt to, occur before there is any dilatation.

In the face of these facts clearly an aortic lesion producing regurgitation is one of the most serious.

I may omit any special discussion of aortic stenosis. We understand by stenosis adhesions of the various segments of the valves, so that a diaphragm more or less annular exists at the junction of the aorta and ventricle, and this diaphragm contracting continues to reduce the size of the central aperture, and producing great obstruction to the emptying of the ventricle. So far as I know aortic stenosis, unaccompanied by lesion of other valve or valves of the heart, is a rare condition. I cannot remember a case where the *post mortem* examination proved its single existence. The ordinary case of aortic stenosis is but a part of the old lesion of endocarditis, and is generally associated with extensive disease of the other orifices.

An aortic obstructive murmur, without evidence of enlargement of the heart, and unaccompanied by the physical signs of regurgitation may be considered as one of the least ominous of endocardial murmurs.

The commonest lesion of the mitral orifice is that which leads to mitral regurgitation. There are few cases of persistent mitral murmur (not hæmic) that are not ultimately followed by hypertrophy of auricle and ventricle. This hypertrophy is, however, usually slow in its occurrence, and providing the blood vessels be in a healthy state, conservative in its tendencies. Moderate hypertrophy from such cause in one whose occupation does not strongly predispose him to cardiac excitement, is not a very serious lesion. In those who are forced to perform laborious work the hypertrophy will generally become rapidly increased, and be followed by dilatation.

The serious import of such lesions can generally be estimated by the extent of cardiac dulness, the discomfort which the heart's action produces, the tendency to cerebral anæmia, and the state of the vessels. In these lesions that which is to be dreaded is not the existing hypertrophy but the subsequent dilatation, evidence

of which is to be found in œdema of feet and lungs.

Cardiac apnoea when severe, and it is often very severe, in these cases is ominous, the patient becoming breathless upon increased exertion, so that walking upstairs, or performing any continuous effort, seriously distresses him. His breathing is of a panting, irregular nature, but the chest is capable of being perfectly and completely filled with air. There is an alteration between the circulation through the lungs and the heart-beat, and the occasional arrest in the breathing serves to restore the respiratory and cardiac rhythm. I would mention this condition of the respiratory system more particularly because it is always a grave sign and may exist without any other evidence of serious cardiac lesion.

Another serious if not fatal symptom seen often in mitral regurgitation is Cheyne-Stokes respiration, or the ascending and descending respiration, where a deep gasping respiratory effort is followed by a series of shallow and graded respirations, ultimately ending in the momentary arrest of the respiratory act. Dr. Fagge ascribes this condition as due to an altered vascular state of the medulla, and regards it as a fatal sign.

Such respiratory symptoms are serious in a two-fold nature. They directly irritate the heart, and they also interfere with the patient's rest, and in that way add a degree of mental irritation most disastrous in its effects upon the diseased organ.

Mitral stenosis is always a disease of slow progress, and one whose duration is to be counted in years. In its early period the hypertrophy is almost wholly limited to the left auricle, and the only general symptom is cardiac apnoea which attends upon the obstruction to the emptying of the pulmonary veins. This together with a proesystolic or post diastolic murmur and peculiar thrill preceding the systole of the heart are the main symptoms.

Here we have a disease where the murmur is out of all proportion to the gravity of the case, for it is a known fact that in those who are able to lead a comparatively quiet life, or whose occupations do not require of them extreme muscular effort, mitral stenosis may exist for a considerable time without causing much incon-

venience. In its character it may be regarded as the result of a fibrous endocarditis where the growth and development of fibrous tissue extends throughout the whole of the left ventricle, and the subsequent contraction of which produces the narrowing of the mitral orifice. It is in all respects a sclerosis. The fatal results in such cases being from œdema of the lung, inducing a predisposition to fatal pulmonary disease, and the prognosis in any case must be measured by the character of the thoracic symptoms. In extensive mitral stenosis sudden death may occur, and this apparently from distention of the left auricle, and its paralysis in consequence of such distention. Pepper, in his system of medicine, says, "The later in life mitral stenosis occurs the more unfavorable the prognosis."

Mitral stenosis sometimes follows upon acute endocarditis, in which case we have both regurgitation and obstruction occurring. Here the left heart is completely disabled, and the most serious and rapidly progressive of all cardiac diseases. Indeed with such a condition the lease of life must needs be short, as the condition most favouring general anasarca is present, together with great predisposition to œdema of the lungs, effusion of serous fluids into the pleura and peritoneal cavities, and passive congestions of the kidneys, all of which tell severely upon the patient.

Another condition where moderate dilatation occurs with perhaps little or no hypertrophy, is in fatty degeneration of the muscular fibres. Here we have one of the most serious pathological changes with comparatively slight indications, the general evidences being more valuable and decided than the physical signs; perhaps the only sign being a weak apical impulse, with feeble and distant heart sounds, but there is often marked anæmia, and with this a tendency to fatty infiltrations generally and throughout the body.

Anæmia when associated with evidence of fatty heart I think may be considered the most serious and occult of cardiac associations and renders such an one very liable to sudden heart failure.

I remember in the case of a young lady, on whom I made an autopsy to discover the cause of death, that both auricles were so completely

infiltrated with fat that no muscular tissue was discernible, and the right ventricle showed only here and there streaks of muscle through it, yet no heart trouble had even been complained of. She had suffered from anæmia, great weakness, and occasional headache.

Some authors mention Cheyne-Stokes breathing as particularly indicative of fatty degeneration. So far as my limited experience extends in regard to this clinical phenomenon it is evidence rather of imperfect blood supply to the medulla, and it is seen oftener in dilatation of the heart than in fatty change without dilatation.

Another point to which I would call special attention is irregularity in the heart's beat. It is often said to occur in fatty disease. What, may I ask, is the significance of irregularity in the heart's beat? I refer to irregularity without other evidence or cardiac symptom, where it has been accidentally discovered, where the irregularity is, for instance, an occasional omission in the beat. Such cases I would regard as in the main of little or no importance. Such irregularities may be congenital. Certainly they often exist for a long term of years and are not productive of ill results, outside of the mental anxiety which they are apt to cause.

In regard to disease of the pulmonary valves, any observation is scarcely necessary. Disease limited to the pulmonary valves is extremely rare, and such lesions as cause regurgitation are generally associated with dilatation, in which all the cavities of the heart share, or the pulmonary artery may be the seat of atheromatous change.

As to functional disorders of the heart. It is generally conceded that purely functional disorders of the heart are in no way dangerous to life, nor are they followed by great hypertrophy. In such cases the heart may be said to be irritable, *i.e.*, where it is more than usually prone to irregularities from nervous action. There is a condition almost allied to chorea of other muscles where excitement produces spasm, and when it is present in a heart, the valves of which are not diseased, it is a simple idiosyncrasy, not liable to induce organic disease nor be productive of harm.

To sum up then what I would say is

1. A diseased valve may be restored to functional activity and leave no ill effects.

2. The diseases of the heart most liable to cause sudden death are aortic regurgitation and fatty disease.

3. That in aortic stenosis the patient has generally the longest lease of life given with any valvular disease, and may live for years after moderate hypertrophy exists.

4. That aortic obstruction and aortic regurgitation when associated constitute the most grave of all cardiac lesions.

5. That lesions of the mitral valve, both obstructive and regurgitant, are slow in causing death.

6. That simple irregularities in the heart's beat may be classed with functional disorders as not showing liability to organic disease.

In these few remarks I have not attempted to discuss all the points bearing upon the subject of cardiac disease. Such would not be possible in an address of twenty minutes. I have merely hoped to suggest a few points upon which a profitable discussion may result. I trust the experience of those before me, greater and better than my own, may be given for the elucidation of this very interesting subject.

Selections.

A NEW ANTISEPTIC DRESSING.*

BY SIR JOSEPH LISTER, BART., F.R.S.,

Surgeon Extraordinary to the Queen. Professor of Clinical Surgery at King's College, London.

Mr. President and Gentlemen,—When I last had the honor, five years ago, of addressing this Society at the request of its President, I brought before you an attempt that I had made to utilise the purely antiseptic properties of corrosive sublimate without the disadvantages attending its highly irritating qualities. I had ascertained that when corrosive sublimate precipitates albumen a precipitate is formed, as was generally supposed, of albuminate of mercury, that is to say, a combination of albumen as an acid with mercury as a base. The bichloride, however, really remains intact, the albumen being only loosely associated with it. I found moreover that this precipitate even after it had been dried, was capable of being dissolved in the serum of the blood, and that this solution in blood serum was powerfully

antiseptic and non-irritating. It was then that I proposed and brought before you a new dressing in the form of what has since been known as a sero-sublimate gauze. This gauze gave very satisfactory results. Nevertheless it was not all that could be desired; it was harsh, it was not very absorbent, and the material of which it was made, the serum of horses' blood, was not always obtainable, and in hot weather it was apt to be decomposed. Soon after that a firm of manufacturing chemists suggested to me that if a fifth part of the weight of sal ammoniac were added to the bichloride of mercury and serum, a much more liquid preparation was obtained, my original preparation being so thick as to be with difficulty diffused in water. This proportion of sal ammoniac in combination with corrosive sublimate constitutes a double salt known to the old chemists as sal alembroth. The next step was to find out whether this double salt possessed the same antiseptic properties as the sublimate. I made experiments and found that the change in no wise impaired the antiseptic properties of the latter; on the contrary it improved them, in that a less proportional quantity of the sublimate in this form answered the same purpose. I found that with both of them, dealing with blood serum, sp.g. 1.025, a proportion of about 1-1500 was required to prevent the development of micro-organisms in the serum. My experiments showed that, weight for weight, the sal alembroth was more efficacious than the sublimate. Another point is that the addition of the ammonia prevents to a large extent the injurious effects of the sublimate on the albumen. Moreover, sal alembroth is very much less irritating than the sublimate. I was at first very pleased with the discovery of these advantages in sal alembroth. But it soon transpired that there were certain disadvantages connected with the use of this double salt, dependent upon its solubility. Sal alembroth is washed out of the dressings with the greatest ease. Another disadvantage on account of its solubility is that the discharge, in permeating the dressing, took up the antiseptic as it went along until, if the discharge were copious and the dressing large, before it got to the edge of the dressing it became so concentrated as to prove extremely irritating. I was, therefore, not satisfied with sal alembroth as an antiseptic dressing, and I have consequently

*Delivered before the Medical Society of London, Nov. 4th, '89.

never published anything in favor of sal alembroth as a dressing.

In the course of the following year I made various experiments with the idea of rendering it more useful, but without success. In February, 1886, my attention was called by Mr. Martindale to the cyanide of mercury as a possibly valuable antiseptic, because it did not coagulate albumen. I therefore made experiments with it and found, indeed, that its inhibitory power was really remarkable. I might refer to the case of cyanide of mercury as a striking example of the difference between germicidal and inhibitory powers. The inhibitory powers of the cyanide are very high, but the germicidal powers turn out to be very low, one part in 1,000 of water being incapable of destroying the germs of bacteria. Moreover, it is so intensely irritating that its high inhibitory powers are more than counterbalanced. I subsequently ascertained that in Watt's Chemistry a double salt of mercury and zinc was described. This is obtained by mixing a solution of the double salt of cyanide of mercury and potash with a solution of sulphate of zinc, when the zinc takes the place of the potassium, and we have a cyanide of mercury and zinc. I therefore obtained some of this material and proceeded to make some experiments with it. It is quite insoluble in water, but it is soluble in 1-150 of glycerine, and in about 1-3000 of blood serum; 1-5000 of the double cyanide kept the serum clear for at least eighteen days in spite of septic inoculation. I then made a series of comparative experiments with serum containing blood corpuscles, and I was pleased to find that with the double cyanide a proportion of 1-1200 was sufficient to prevent putrefaction. I therefore proceeded to prepare dressings with the new salt, using glycerine to prevent it falling out of the gauze. As it was so insoluble I associated with it some simple cyanide of mercury. With the gauze thus prepared we tried a number of experiments in the way of dressings. There were disappointments, for instance, we got, now and then, big pustules as the result of a peculiar kind of irritation, and we also noticed occasionally cases in which suppuration came on at a late period of the case. In consequence, I gave up the use of this dressing for the time being. I then directed my attention to the biniodide of mercury which had the advantage

over sal alembroth of being little soluble in water or blood serum. The iodide of mercury gauze answered its purpose very well so far as antiseptis was concerned, but it produced an uncontrollable inflammation. In order to prevent this, we had to interpose between it and the skin unprepared gauze steeped in a 1-4000 solution of the sublimate. Ultimately I became dissatisfied with the iodide of mercury dressing, but there was one point worth noticing, viz., that if you dissolve iodide of potassium in a weak solution of starch, and then add the solution of bichloride of mercury, the resulting iodide of mercury associates itself with the starch particles in a most intimate manner, and are then precipitated together.

I then turned my attention once more to the double cyanide of mercury and zinc. Now sal alembroth not being volatile, it is quite possible that when we apply it to the wound we might apply living organisms at the same time, so I moistened them, and though now two years have elapsed since I began doing so, we have not on a single occasion had to complain of septic mischief. We interposed gauze steeped in a 1-4000 solution of the sublimate, but the sublimate solution took away the glycerine, and then the double iodide came out. It was here that the combination of the iodide of mercury with starch came in useful. I found on experiment that the double iodide carried down the starch in the same way, and that when precipitated on gauze it did not in the least tend to dust off. On mixing the double iodide with the starch it combined readily enough, but it was a lumpy, sticky mass. I therefore saturated the gauze with the double iodide and then put it into a solution of starch. That fixed it in the gauze admirably. This is the gauze I have used for twelve months past in hospital and private practice.

It subsequently occurred to me to prepare the double cyanide and starch with sulphate of potash, which serves the same purpose here as in Dover's powder. Thus prepared the mixed salts can be powdered and easily diffused in water. We have thus a means of easily charging gauze with the double cyanide. As, however, this compound, though strongly inhibitory, is not germicidal, it should be moistened before using with a 1-4000 solution of the sublimate,

and you may then be sure that your dressing contains no living organisms.

In actual practice the layer which is put next to the skin is washed in a solution of carbolic acid. This washes out the corrosive sublimate. By this means I have obtained perfect results in practice in wounds of every description.

Since then I have made a series of experiments into the antiseptic value of the cyanide of zinc by itself, in order to be sure that the good effects of the double salt were not due to only one of its constituents.

I noticed, however, the manager at Messrs. Mawson and Son told me that there was really very little mercury in the double cyanide, and he asked whether I was certain that it was not the cyanide of zinc that possessed the powers which I had shown the dressing to possess. I satisfied myself that the cyanide of zinc actually possesses antiseptic properties which may by-and-by be turned to useful account, but it is vastly inferior to the double cyanide. It seemed to possess the power of preventing the acid fermentation, though it did not prevent decomposition. Of course, in actual practice the antiseptics are not exposed to so severe a test as in the experiments which I have carried out. Since I have used the double cyanide in my practice we have not had a single case of septic changes or deep seated suppuration. The exact nature of this double salt is still uncertain, but it is being investigated by the Pharmaceutical Society. They were inclined to think it was an unstable compound of zinc and mercury, because when they washed it they got mercury coming away in solution. I find, however, that Messrs. Mawson did very little washing, and that the mercury that came away consisted of the soluble salts to which I have already alluded. Wash it as you will you cannot deprive it of its essential element. If the mercury were only loosely attached to the zinc it would separate, and give rise to irritation, which is not the case.

These observations give a very inadequate idea of the toil they have entailed. There are some among you who hold that the use of antiseptic substances is useless when not injurious, but the germ theory is now firmly established on an invincible basis. I am prepared to admit the antiseptic powers of human tissues, indeed, I

believe that I was the first to call attention to them, but we know by experience that they are not always to be trusted, and that the use of antiseptic adjuvants is in the highest degree valuable. To those who still preserve some faith in antiseptics, I present them this dressing as the best article of the kind I have been enabled to discover, and I venture to hope that they will regard it as a not unacceptable addition to their resources.

CONTRIBUTION TO THE STUDY OF THE PATHOGENESIS OF THE AL- BUMINURIA AND ECLAMPSIA OF PREGNANCY.

BY DR. EMILE BLANC.

(Translated from Lyon Medical, No. 38, 1889.)

At the beginning of the year 1889 we found in the urine of eclamptic women a microbe with intense and well-defined pathogenic effects. During the course of the summer we went on with these researches, and extended them to the albuminuria of pregnancy, which seemed in some cases, to have a microbe origin. In these women with albuminuria, as well as in the eclamptics, we have examined and cultivated the blood and urine. With the fertile cultures of these liquids we have made a series of inoculations in fourteen rabbits, four of which were in a condition of gestation.

1. *Albuminuria of Pregnancy.* The micro-organisms, which we found in the urine of certain pregnant women with albuminuria, belong to different species. We shall refer to only two of them. (1). Several varieties of cocci, very minute, capable, or not, of liquifying gelatin, and giving rise on this nutritive medium to white colonies, more rarely yellow, in the form of points, small spots, or even very fine flowers. (2). A slender bacillus, regular, short, the length 1-3 times the breadth. The length seemed to be subject to numerous variations according to the age of the culture, and its nutrient medium; it was sometimes reduced to so small a point, as to appear like a coccus. The gelatin was liquified or not, according to conditions of the culture or medium, which we need not refer to at present. With cultures furnished by these micro-organisms, we inoculated by intra-venous injection only non-pregnant rabbits. The cocci had no

very marked pathological effect. It was otherwise however, with the bacilli. These, cultivated in bouillon, and inoculated in a dose of 2 or 3 c.c., sometimes caused the speedy death of the animal, and sometimes general phenomena of a grave nature (defective nutrition, lowering of temperature, paraplegia) accompanied by albuminuria. In two or three cases we observed local phenomena, such as swelling and gangrene at the point of inoculation, without general effects. The urine of an albuminuric, containing an undoubted bacillus, gave rise, by its introduction into blood, to cocci, slightly elongated, oval, joined in twos or threes, or even forming chains of the same kind as those we shall find in the eclamptics. These alterations of form, determined by change of media, in the same animal, have been observed quite lately by Charriñ in the case of the pyocyanic microbe.

2. *Eclampsia*. We have examined and made cultures of the urine and blood of three eclamptic women. The urine cultures (on gelatin and by Esmarch's method) were always fertile. However, the development of the colonies once or twice was accomplished slowly, and we might say even with difficulty. The blood, introduced into veal broth, furnished in two cases a rapidly fertile culture. In these two cases the fluid was taken at the period of crisis. These researches have always enabled us to demonstrate the presence of a microbe in the form of an elongated coccus, or rather of a short bacillus, showing at both ends dark points analogous to nuclei, and most commonly united in little chains on the gelatin. The colonies formed on the gelatin little yellowish-white points, regularly rounded and progressively increasing in size. The gelatin was usually liquified. But with the same colony which had liquified the nutritive medium, we were able to obtain in the same conditions, and to preserve indefinitely a thick culture, large, arranged in flowers, and of a pearly aspect.

With the culture bouillon produced from the urine of the first eclamptic (April 8th), we inoculated in the auricular vein (2 c.c.) a rabbit which we thought pregnant. Anuria and considerable prostration followed. Two other inoculations, made at intervals of two days, produced albuminuria, and an accentuation of the general phenomena. The animal died, and

we were able to satisfy ourselves, but too late, that there had been no gestation.

The blood and urine of a second eclamptic (April 21st) having furnished us excellent cultures, we prepared to repeat the experiment. Accordingly, we placed a rabbit, seventeen or eighteen days pregnant, in a large wooden box, which we were using as a cage. At the end of two or three days, without any inoculation having been made, we observed that this rabbit had become so excited that it was absolutely impossible to catch it. Soon it dropped seven dead young ones. We immediately isolated it, and found that it had anuria, and that the small amount of urine passed was strongly albuminous. These symptoms disappeared quite rapidly (5 or 6 days).

The wooden box in which we had placed the animal, had already contained several inoculated rabbits: and two of them had died in it. There was no way of escape for the urine, which thus soiled the walls of the box and the food. We then suspected the possibility of infection, and placed in the same conditions a second pregnant rabbit. Two days afterwards it dropped five or six young ones, one or two of which were dead; the others also died. This rabbit was isolated only at the end of five or six days. It had no albuminuria then, but there was considerable emaciation. It is proper to add that it had been inoculated some months before when not pregnant. We exposed to the same danger a third rabbit, but at that time not in a condition of gestation; it succumbed very rapidly. The culture of its blood was fertile; its kidneys were congested, and its lungs contained several old lardaceous nodules. This rabbit had also been inoculated some months before.

Finally a third eclamptic (June 12th) allowed us to obtain some other results. With 3 c.c. of a culture furnished by her blood, a rapidly fertile culture, we inoculated a rabbit pregnant eighteen days. It died at the end of ten or twelve hours with intense convulsive phenomena, and not without having expelled one or two of its young dead.

The last pregnant rabbit inoculated with a smaller quantity of another culture bouillon (an older culture) exhibited only mild general phenomena, and an intense albuminuria. It became rapidly emaciated and miscarried before term;

two of the young were born dead, the others survived only a short time.

G. A.

METHODS EMPLOYED IN PRODUCING HYPNOTISM, FROM A THERAPEUTIC STANDPOINT.*

BY PROF. BERNHEIM, OF NANCY.

Translated from the *Revista de Ciencias Medicas*, of Barcelona.

The hypnotic state is that particular psychical state susceptible of being provoked, and which increases susceptibility in various degrees; that is to say, the aptitude of being influenced by an idea accepted by the brain, and of realizing it.

In order to demonstrate this I proceed sometimes in the following manner, with very responsive individuals:

I commence the hypnosis, or suggestion, rather, by movements or sensibility. I raise the subject's arm; it is catalepsy; I provoke contracture. Then I add analgesia, after which I induce hallucinations, or make him do acts which he cannot stop. All these suggestions are realized in a perfectly waking state; the individual retains his memory. Then I merely say, "Sleep," and he goes to sleep, as the result of a special suggestion, not necessary for the performance of the preceding acts. In regard to the procedures for provoking hypnotism, it may be said that they are as numerous as the hypnotizers themselves.

The individual sleeps (or is hypnotized) when he knows that he ought to sleep, when he believes that he is going to sleep, and when he experiences a sensation that invites to sleep. It is his own faith, his psychic impressionability which puts him to sleep.

Gestures are merely useful to re-enforce the suggestion by serving to concentrate the attention of the subject upon something plain.

Experience shows that the simplest and most effective medium of impressing the subject is speech. Some, though exceptionally, are so easy to impress that a single sentence is sufficient to provoke all the phenomena of hypnotism, with or without sleep. From the very first and without having witnessed any experiment, I would raise the arm of such a subject, and

say: "You cannot lower it"; and, indeed, he could not. I would say to him: "Your body is insensible," and stick him with a pin, and he would show no signs of pain.

I might dwell upon the grave social and medical interest presented by the study of such extremely suggestible natures, which are by no means rare. Delivered up without resistance by their organization to the annoyance of all conscious or unconscious suggestions which they may encounter, these natures are frequently irresponsible, and become either heroes or criminals, or alternately the ones or the others. They are fortunate, indeed, if the early suggestions of a well directed education can prevail against later injurious suggestions. It rests with the teachers to discover in childhood these highly suggestible natures, and to build up in their minds a resistance proof against future bad suggestions.

When I have to deal with a very timid person, or one who has been frightened, I generally wait and do not try to coerce him. I simply tell him that hypnotism would be useful to him, and I show him the happy effects, and then wait until he (or she) requests me to apply hypnotism.

Hypnosis is generally easy; the subject is lying or seated upon a large chair. I let him concentrate himself for several moments, while I tell him that I am going to put him easily into a quiet, gentle sleep, like natural sleep.

I gently put one hand near his eyes, and say, "Sleep." Some close their eyes instantly, and are hypnotized; others do not close their eyes, but gaze fixedly, and present all the phenomena of hypnotism; others blink, opening and closing the eyes alternately. As a rule, they do not keep the eyes open a long time. If they do not close them spontaneously I keep them shut for some time; and if I still find resistance, I add, "Your eyelids are heavy, your limbs are asleep, sleep is coming; sleep!" It is rare for one or two minutes to pass without the occurrence of hypnosis. Some subjects remain motionless and inert from the beginning; others try to recover, waking up, and opening their eyes every moment; I insist, keep the eyes closed, and say, "Continue to sleep."

The operator should be cool and self-possessed. If he doubt his own power, or seem

*Abstracted from a communication read at the International Congress of Experimental Therapeutic Hypnotism.

to doubt it, the subject, on this account, will experience a counter-suggestive influence; he will not sleep, or else wakes up. If it appear that it costs the operator much trouble to hypnotize the subject, the latter will think that he is difficult to hypnotize, and the more he dwells on the idea, the more does he resist the hypnotizing. Calmness, confidence, and simplicity in the procedures are the surest means of succeeding.

Whatever procedure may be adopted, every operator will acquire the habit of changing his methods and adapting them to the psychic individuality of each subject. Gentleness succeeds best in some cases, brusqueness in others. Closing the eyes, friction of the eyeballs, prolonged, continuous, and monotonous exhortation, an authoritative tone of voice, a material suggestion, such as heat, concentrating the attention upon one sensation, and making the sensorium captive so that it cannot be distracted by other objects, all these are not subject to any fixed rule. Every operator fashions in the course of time his own *modus faciendi*.

A word on awakening the hypnotized subjects. It takes place in the simplest manner possible by suggestion. Usually I say to them, "It is finished; wake up!" The most of them wake, but some seem to have some trouble in doing so, at least in the first few sittings. It seems that they do not hear the command. They have not enough initiative to emerge spontaneously from the hypnotic state. Then I say to them, "Open your eyes! You are awake." Or, re-enforcing the suggestion by means of a material practice I direct an assistant to touch any part of the head or body, and say, "It is only necessary to touch this point in order to make him open his eyes immediately." This measure hardly ever fails. It suffices that I merely touch or press the place mentioned; the patient immediately wakes. I never employ frictions or insufflations upon the eyes. Waking becomes a very simple matter, when it is remembered that it is all due to suggestion.

Hypnotism, from a medical point of view, has for its object to increase suggestibility and to place the cerebro-spinal system in such a state that suggestion incites it to perform acts conducive to cure.

Suggestion may take place without hypnosis. In subjects rebellious to hypnotic phenomena, we can, notwithstanding, practice therapeutic suggestion on them. I obtain notable effects without sleep; I request the patient to close his eyes and concentrate his attention upon me; I endeavour to impress him and enchain his will, and I affirm to him that certain functional disorders have disappeared. It is suggestion by speaking, without hypnotism.

Hypnotism and speaking do not enjoy a monopoly of suggestion. This may be produced by other agencies; in all times it has been practised by all physicians, consciously or unconsciously. Purging with bread-pills, the cure of convulsionists through fear of the guardians of public safety, sleep produced by peroxide of hydrogen, the miraculous water of Lourdes, the practices of the faith healers, of hydrotherapy, of metallotherapy, of electrotherapy, of secret ointments, of the granules of Mattei, of homœopathy, of suspension of persons afflicted with locomotor ataxia, act either wholly or partly by suggestion. No doubt, hydrotherapy and electrotherapy have themselves an undoubted action upon the functions of the organism, but this action is imperfectly known, and the statement of authors concerning the therapeutic value of these various methods are vague and conflicting, precisely because they did not eliminate the element of suggestion.

Electricity frequently relieves pains, neuralgias, rheumatism, lumbago, nervous aphonia, etc., when I state to the subject that the symptom ought to disappear under the influence of electricity, at the same time fixing his attention upon the effect obtained while the agent is being applied.

The suspension of ataxic patients has lately created a great stir. The surprising improvements obtained have been attributed to changes in the circulation in the spinal cord, or to the stretching of the nerves. From the beginning I thought that suspension constituted an eminently suggestive apparatus. Dr. Hans Halser, chief of clinic of my colleague Spillman, has tried the method in a great many cases, and has obtained happy results, not only in ataxic patients, but also in other varieties of myelitis, in rheumatism, hysteria, nocturnal incontinence of urine, and in the most varied neuroses; but

he concludes that suggestion plays the most important curative part, if not exclusively so, in the new method.

In order to eliminate the hypothesis of a muscular modification, or a nerve stretching, I have tried horizontal suspension. The subject is elevated horizontally by a belt around his body, while his feet and arms were raised by means of bracelets. Under these circumstances there is no congestion or stretching, and, nevertheless, I have obtained notable cures. An alcohol paraplegic, who could neither walk nor stand up without support, was able, after a few suspensions, to walk around without assistance.

A sufferer from sciatica, who had already failed to obtain relief from suggestion, quickly improved after several suspensions; and this patient, who had been confined to her bed for several weeks, could rise up again. A diffuse myelitis, with absolute paraplegia, improved after ten sittings. A hysterical hyperæsthesia of the abdomen, accompanied with vomiting, disappeared after two sittings. Suggestion alone, embodied in some impressive material manipulations, has produced these results.

Modern medicine, too much influenced by organic ideas, tries to explain all the mysteries of life by mechanics, physics, and animal chemistry. Notwithstanding spirit is something in the human organism, psycho-biology exists, and there is also psycho-therapy.

From all this I think I can deduce that suggestive therapeutics rests upon the undeniable evidence of the influence of spirit upon matter. The influence of the mind upon digestion, nutrition, respiration, heart movements, the secretion of sweat, urine, bile, etc., upon the excretions, menstruation, etc., is well known; as all of the organs, and all of the functions, are in automatic and physiological relation with cerebro-spinal centres, every point of the body, so to speak, has its connection with a nerve cell. Every cerebral cell actuated by an idea tries to realize this idea by putting into activity the nerve fibres corresponding to its realization. The idea tends to transform itself into an act. The whole of suggestive psycho-therapeutics is based upon this physiological fact.

Whatever be the moral cause that incites the psychic nervous centre to intervene to modify usefully the organic functions of our bodies, the

dynamic mechanism of suggestive therapeutics is always the same.

It is faith that saves, and the most skeptical always have faith (I do not refer to religious belief); they cannot shake it off, just as we can not shake off the hallucinations of dreams. Credulity (I do not refer to creeds), is inherent in the human spirit. By means of this the human spirit is the great artificer of miracles.—*New Orleans Med. and Surg. Jour.*

FURTHER EXPERIENCE OF SUSPENSION IN LOCOMOTOR ATAXY.

Further experience of the suspension treatment in this country scarcely confirms the roseate expectations which practitioners were led by Continental authorities to anticipate. The cause may possibly lie in some ethnological peculiarity, Englishmen being notoriously much less impressionable than Frenchmen, for example. Perhaps, too, English physicians are less easily carried away from the *terra firma* of cool judgment by the wind of scientific enthusiasm than some of their foreign brethren. However that may be, the comparative failure of the method here, as contrasted with the brilliant success claimed for it abroad, is an interesting fact which should be borne in mind when wonderful results in other directions are announced in other countries.

Dr. Saundby, of Birmingham, who was one of the first to try suspension in this country, has recently reported six cases in which he gave the method a further trial. In all cases the suspension was carried out for a short time at first, usually for 15 or 30 seconds, and the time was increased daily until the patient could bear 4 minutes. In only one of the six cases were any really uncomfortable sensations complained of; in that case the patient became pale and felt sick and faint, on one or two occasions, but recovered completely in about half an hour.

The following is a brief summary of the cases:—

1. Man, aged 52; illness of nine months' standing; suspended 30 times. Was able to pass water naturally and to walk about better; pains not so severe, but recurred at times; decidedly improved.
2. Man, aged 34; illness had lasted between one and two years; suspended 33 times. When

discharged, bladder trouble had gone, but other symptoms were just as before.

3. Man, aged 40; illness of some years' standing; suspended 23 times. When discharged he was suffering less pain, but walked quite as badly as at first.

4. Man, aged 69; duration of illness not stated; suspended 5 times. Could walk no better, but general health improved.

5. Man, aged 43; duration of illness eight years; suspended 10 times in all, but bore treatment badly. Could walk better, but pain still severe. Some time after discharge the patient stated that he was engaged to ride in some bicycle contests, so that he had probably improved.

6. Man, aged 34, duration of illness about one year; suspended 10 times; refused to continue treatment as he thought it brought on the pains. Discharged in *statu quo*.

Dr. Saundby sums up the results as follows: "It cannot be definitely stated that any one of these cases derived benefit from the suspension. E.G. (case 1) certainly improved under treatment and was able to walk better when he left the hospital, but the influence of the suspension on the result was doubtful." In case 5 the improvement seems to have been *in spite of* the suspension.

Five cases in which the plan was tried have also been reported by Mr. J. R. Lunn, Medical Superintendent of St. Marylebone Infirmary. The following is a summary of them:—

1. Man, aged 58; duration of illness between six and seven years; suspended 28 times for periods ranging from 40 seconds to 4 minutes, at intervals of a few days. "He improved remarkably, and on leaving could walk over half a mile without a stick; no change in ataxic character of gait, or in the sensation of the feet and legs."

2. Man, aged 57; duration of illness between thirteen and fourteen years; suspended 15 times. No improvement.

3. Woman, aged 45; illness of from four to five years' standing; suspended 15 times; declined further treatment. No improvement.

4. Man, aged 73; duration of illness between ten and eleven years; suspended 3 times; refused to submit to more. No improvement.

5. Man, aged 52; duration of illness between

five and six years; suspended 9 times. No improvement.

In only one, therefore, of the five cases were favorable results obtained. In all of them the suspension caused either pain or giddiness.

Dr. Churton, of Leeds, has also expressed an unfavorable opinion of suspension, but apparently more on the "high *à priori*" ground than on adequate experience. He appears so far to have actually tried it in only one case, that of a man, aged 39, who had had ataxic symptoms for about a year and a half. This patient was suspended daily for five minutes from May 22 to June 3, "when it was noted that there was not the smallest improvement in any way; indeed, he was worse." It will be noted, however, that Dr. Churton did not apply the treatment in quite the orthodox manner. He began with what may be called a very "stiff dose," and continued it all through at rather high pressure.

On the other hand Dr. Julius Althaus professes to have had a satisfactory result in a very unpromising case. The patient was a gentleman aged 56, who had been under observation since November, 1885, and was in an advanced stage of the disease. Suspension was begun in March of the present year; the first time for half a minute, the second time for one minute, and the third for a minute and a half. "After the third suspension improvement set in, more especially in walking; and from that time the patient made rapid strides towards recovery." He was suspended altogether 33 times, and then felt so well that he could discontinue his visits. Dr. Althaus adds, "The knee-jerk, which had been absent certainly since November, 1885, and possibly longer, reappeared in June last, this being, as far as I am aware, the first and as yet the only case in which such a result has occurred after suspension." On Sept. 26 the patient was again seen by Dr. Althaus, who found him "in good working condition, the only symptom which remained being some degree of anasarca." During the five years that this patient had been under observation before suspension was commenced, every therapeutic measure that could be thought of was tried without the least result.

Dr. Ladame, of Geneva, has also obtained good results from suspension. He has practised

the method 282 times in 16 cases of spinal disease (15 of tabes and 1 of Friedreich's ataxy), the greatest number of suspensions in individual cases varying from 29 to 35. The operation was performed on alternate days, the suspension lasting from two to three minutes in patients weighing from 11½ to 14 stone, and four minutes or even more in those weighing from 7 to 10 stone. In several cases decided improvement took place, but in others the result was *nil*. In those cases in which benefit was derived from the treatment, there was usually a slight relapse after the first few suspensions, followed by steady and apparently permanent amelioration, which began to show itself between the twentieth and thirtieth operations.—*Med. Recorder*.

THE TREATMENT OF RETENTION OF URINE DUE TO ENLARGED PROSTATE.

Enlargement of the prostate gland, with its consequent disastrous effects upon the urinary bladder, occupies, unfortunately, a prominent place in the long list of diseases that belong to old age, and, until recent years, all that surgical skill could do for it, no matter how severe might be the suffering it caused, was to deal with it in a manner purely palliative. To be sure, in a certain proportion of cases the use of the catheter has yielded results more or less satisfactory, and, of course, there always will be cases in which it will be found a valuable source of relief. On the other hand, instances will be met with in which the catheter, although it may have been for years employed with none but satisfactory effect, all at once becomes a source of irritation, or infection perhaps, and establishes a troublesome cystitis, which eventually is fatal. For such cases the surgeon should possess radical means of cure.

As a step in this direction the operation of perineal incision for drainage of the bladder, which has been a recognized procedure for at least a decade, was introduced. It holds out the promise of certain relief, but not of cure, and in spite of the good results it has yielded, it possesses the disadvantage of being but a temporary measure. Permanent cure is attainable only through an operation which effects the removal of the hypertrophied prostate, or such part of

it as is obviously the cause of the patient's disability. Prostatectomy is an accomplishment of modern surgery, in fact, of very recent years, and, as is generally known, there are three methods in which it has been performed—the urethral, the perineal, and the supra-pubic. Against the first two the strong objections of uncertainty and extreme difficulty of performance must be urged, while the last is an essentially simple operation, and presents the great advantage of permitting the operator to learn through the sense of sight, as well as touch, the precise state of affairs he has to deal with.

At the meeting of the British Medical Association, held at Leeds in August last, there took place a most interesting discussion on the subject of "The Treatment of Retention of Urine from Prostatic Enlargement." It appears in the *British Medical Journal* for October 19. The discussion was opened by Mr. A. F. McGill, Surgeon to the Leeds Infirmary, who presented in a very concise manner an admirable and most instructive paper. Confining his attention entirely to those cases of enlarged prostate in which retention is chronic, requiring habitually artificial relief, the speaker made his remarks in a series of propositions, which he himself discussed, and then invited expressions of opinion from the other members of the surgical section of the Association. Mr. McGill's propositions are the following: 1. That prostatic enlargements which give rise to urinary symptoms are intra-vesical and not rectal. 2. That retention is caused by a valve-like action of intra vesical prostate, the urethral orifice being closed more or less completely by the contraction of the bladder on its contents. 3. That in many cases self-catheterization is the only treatment required. 4. That when the catheter treatment fails, or is unavailable, more radical measures are necessary. 5. That this treatment, to be effectual, should (1) for a time thoroughly drain the bladder, and (2) permanently remove the cause of obstruction. 6. That these conditions are best fulfilled by a supra-pubic rather than a urethral or perineal operation. A table comprising twenty-four cases in which the operation had been performed at the Leeds Infirmary accompanies the paper, and from it we learn with surprise the excellent results obtained. Considering the fact that the patients were all elderly, some very old and

feeble men, the mortality of four cases in twenty-four (16.6 per cent.) must be considered, as Mr. McGill puts it, "lower than might reasonably be expected." Granting, however, that recovery was the result in so large a majority of these cases, so far as the operation itself was concerned, the question still remains to be answered as to what was accomplished in the direction of radical cure. In reply we have from McGill the following figures, excluding from the twenty-four tabulated cases seven in which the operation was undertaken for the removal of stone and the prostatectomy was incidental: four deaths, three resulting immediately from the operation, and one from pneumonia during convalescence; two cases still under observation, and one lost sight of—fourteen in all—ten remaining in which the final result can be stated. "Of these ten, eight have continued well, but one requiring the passage of a catheter, and that only after excessive drinking." The ninth case was one in which it was found impossible to remove the prostate, owing to its extreme hardness, and in which accordingly only supra-pubic drainage was attempted. The tenth case died ten months after the operation, having, however, been relieved for a time. To have afforded permanent relief in eight out of ten cases seems to us a most creditable showing.

We cannot forego alluding to the very graceful manner in which Mr. McGill acknowledges as the first surgeon to perform supra-pubic prostatectomy Dr. Belfield of Chicago, the date being October, 1886.

The discussion which was elicited by Mr. McGill's paper was scarcely less interesting, and the unmistakable bent of opinion was in favor of radical operation in properly selected cases of prostatic enlargement.

Let us hope that American surgeons, many of whom have already performed supra-pubic prostatectomy, will give it the fair trial that it so richly deserves. Surely, the above results invite it.—*Med. News.*

NON-RETENTION OF URINE BY YOUNG GIRLS AND WOMEN.—H. Marion Sims attributes this troublesome condition to the contraction of the bladder walls from hypertrophy of the muscular coat, its holding capacity being thereby lessened. Of the cases which he has treated, both in chil-

dren and adults, he has cured all but two completely, with nothing other than the forcible dilatation by warm water. The water is injected with a Davidson syringe and ordinary silver catheter. The water used was just comfortably warm, and the quantity measured by knowing the capacity of the bulb of the syringe. The quantity which could be held in one of the cases was at first but one and three-quarter ounces, but was increased daily until eighteen ounces could be held without severe pain. The treatment lasted three months.—*American Journal of Obstetrics.*

OPIMUM IN THE INTESTINAL HÆMORRHAGE OF TYPHOID FEVER.—Dr. J. A. Lindsay, of Belfast, writing on hemorrhage from the bowel in typhoid fever, says that he has always been accustomed to follow Murchison's instructions, and has given tannic acid, laudanum, and turpentine, with ice externally and ergotin by hypodermic injections. Some good authorities prefer to omit the turpentine, but he cannot say that he has ever seen any harm resulting from its use, and its power as a hæmostatic is undoubted. In one of his cases he gave laudanum pretty freely, in spite of the presence of albumen in the urine, and with good results—no sign of narcotism appearing. He is disposed to think that in hæmatocle and other forms of internal bleeding, opium may be given fearlessly, and pushed even to heroic doses. Stimulants are certainly required in some cases, but must be regulated with much caution. While intestinal hæmorrhage in typhoid fever is a serious symptom, it is by no means usually fatal, and prompt and decisive treatment is called for, and will often prove effectual.—*Dublin Jour. of Med. Sciences.*

CODEIA IN GYNÆCOLOGICAL PRACTICE.—Dr. Freund, of Strausburg, who was induced by the favorable opinion of Professor Schroder on the suitability of codeia for the treatment of pain in diseases of the female genital organs to give it a trial, has published the results of his experience in the *Therapeutische Monatsheft*. He found that pain originating in the uterus, and depending upon either acute or chronic affections of that organ or upon dysmenorrhœa, was only affected in a very transitory way by codeia, and never to nearly the same extent as by opium or

morphia. Extensive effusions, too, into the pelvic peritoneum or into the cellular tissue were but little improved by codeia, and the same might be said of diseases of the tubes. On the other hand, however, he found that it exerted a true, unmistakable and immediate effect upon pains of all sorts having their origin in the ovaries, whether there was displacement, prolapse, ovaritis, peri-ovary, or the so-called "ovarian neuralgia." In all these cases codeia, even in small doses, appeared capable of exercising a marked control over the pain, and in many cases of arresting it altogether. Of course suitable local and dietetic treatment was applied simultaneously. As to the doses given, the usual plan was to order a pill containing half a grain of codeia made up with gentian and liquorice, to be taken three times a day. Occasionally larger doses had to be given. In no case, however, was any unpleasant effect observed, and there were no signs of any cumulative action, some of the patients taking these pills for a month.—*Lancet*, Nov. 2.

DEATH AT THE COMMENCEMENT OF CHLOROFORM INHALATION.—A Birmingham correspondent writes: "A curious death occurred here recently, during the administration of chloroform. A lady, about 25 years of age, of very nervous, excitable temperament, desired to have some teeth extracted, and insisted upon an anæsthetic. In the presence of her husband and the dentist, her medical attendant administered chloroform. The patient was seated in an easy chair, and after inhaling a few breaths of chloroform, she slipped down in the chair, and her pulse and breathing were both found to be stopped. Artificial respiration was at once resorted to, but without success. It seems perfectly clear that the patient was not anæsthetised when she died, as she had only just commenced to inhale the chloroform, and, of course, no attempt had been made to extract her teeth. The coroner's jury returned a verdict that death was due to syncope, and that no blame whatever attached to the administrator." Syncope, as has long been known, will result from any very violent emotion, and especially from the effects of fear. In a case recorded in Germany a few years back, a female patient visited a dentist, and requested him to extract some carious

teeth, demanding at the same time that she should be chloroformed. The dentist, very properly, explained the risks of chloroform, and suggested nitrous oxide; but his patient persisted, and he consented to humor her. Having, however, a wholesome dread of chloroform, he substituted eau-de-cologne, and bade her inhale the supposed anæsthetic from a folded towel. After two or three inspirations she suddenly fell from the chair and died. That death occurs from fear in some cases during the earliest stage of chloroforming is unquestionable; and as it is predisposed to by the sitting posture, and by forcibly restraining the patient's voluntary movements, there can be very little doubt that in every case in which chloroform is to be administered, the recumbent posture should be insisted upon, and a loose dressing gown substituted for the usual workaday costume. There is another point of no small importance, which is that chloroform increases the liability to death from "reflex syncope." A person partly under chloroform is more prone to die from fright than one to whom chloroform has not been administered. Nor must it be forgotten that deaths occur when only one or two inspirations of chloroform have been taken; this is liable to take place when a too concentrated vapour (that is, one of greater strength than 4 per cent.) is employed. In the event of syncope occurring in one of the ways above indicated, the line of treatment which offers the greatest chance of success is total inversion of the patient, while care is taken that the rima glottidis is maintained patent for entrance of air. Dr. Chisholm, who has strongly supported this, Nélaton's original manœuvre, has recorded some highly instructive cases in which the method of inversion, being promptly performed, effected resuscitation, and so saved the patient's life. But here a caution must be given. Nélaton's method is valuable only in primary syncope, and is absolutely dangerous in cases of heart failure consecutive upon pulmonary engorgement and overfilling of the right heart; or, in short, when respiration stops before the heart ceases to beat. Cases belonging to this last category do not occur, as a rule, until the later stages of chloroformisation, and the respiratory failure is then due to overdosage with the anæsthetic.—*Brit. Med. Jour.*

THE
Canadian Practitioner

A SEMI-MONTHLY REVIEW OF THE PROGRESS
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PERIOD OF STUDY.

The question of extending the period of professional study to five years is now being seriously considered in England. In Germany they have at present a five years' course with an agitation in favor of six years' preparation for active professional work. When will Ontario realize the fact that the profession is becoming sadly over-crowded, that the medical schools have more students than they can properly train, that there are altogether too many didactic lectures demanded, and not sufficient hospital work required by our Medical Council?

A NEW MEDICAL JOURNAL.

The Mississippi Valley is not to be left in total darkness. Dr. Love of St. Louis, is going to run a Medical Journal—the "*Medical Mirror*." From information kindly furnished by Dr. Love, we are led to believe that Dr. Love will make a good Editor. We are also pleased to learn he has a boy. He has addressed us in terms that are touching as well as flowery. He says: "I trust I may keep my vessel in good sailing shape during my life, and at its close leave it in good trim for my boy, who I fondly hope will follow in my trail." With pleasure we exclaim,—Success to Dr. Love, his *Mirror*, and his Boy, may they shed much light in the dark valley!

ONTARIO MEDICAL COUNCIL.

The next election for the Territorial members of the Ontario Medical Council will be held in March 1890. The voting papers will be sent to all registered practitioners, not later than the

second Tuesday in March next. The different Returning Officers will receive votes up to 2 p.m. on the last Tuesday of March, and at same hour will open the envelopes in the presence of candidates or their agents.

We have reason to believe that there will not be many changes in the personnel of the new Council, although there will be a few. This will probably be highly satisfactory to the majority of the Profession who have lately acquired a more exalted opinion of the merits of the Council's legislations. The Midland and York division is one of the few which is likely to send a new member.

MARITIME MEDICAL ASSOCIATION.

We learn from the *Maritime Medical News*, that a Medical Association is likely to be formed for the Provinces of New Brunswick, Nova Scotia and Prince Edward Island. It is thought by many in the lower Provinces that the Canadian Medical Association has not fulfilled the expectations of its founders in all respects. There is no doubt that the large Society has not grown as it should. It is weak numerically when compared with the Ontario Association, and yet we hope to have a meeting next September in Toronto, which will show that there is very considerable vitality in the old Society yet.

We would gladly see a Maritime Medical Association formed in the manner suggested. We have great faith in the ability of our friends down beside the sea. We believe a Society could be formed by them which would be a credit to Canada, and a great benefit to the Profession of a very important portion of the Dominion. At the best under present circumstances only a few from the far east can be induced to come even as far west as Montreal, and on the other hand very few from the west attended the two meetings of the Canadian Medical Association held in the lower Provinces. We think it quite possible that the formation of the new Society might in the future add some strength to the Dominion Association. At all events it could scarcely do it any harm.

NOTES.

THE LATE DR. KRAUSS's office and waiting-room, 29 Elm street, are to rent. All necessary attendance given.

ACCORDING to the recent Greek census, the population amounted to about 2,200,000 persons, with a unique showing of an excess of males, the proportion of males was 107.6 to 100 females.

THE *Montreal Medical Journal* regards the Harvey execution as a cruel, judicial murder. That the unfortunate man was insane at the time he killed the members of his family, many leading experts in insanity fully believe.

A PATIENT WITH SUSPECTED LESION OF THE BRAIN or its membranesshould be attentively and frequently watched, as the first symptoms of cerebral irritation e.g. convulsions, give the most valuable indication of the localization of the injury; also the temperature should be taken frequently, as an ominous rise may be sudden and rapid. Dr. Robertson thinks an intelligent observer should be in constant attendance on such cases.—*Keetley in Wood's Monographs.*

THE VALUE OF A BALD HEAD.—An English exchange says: There is a real commercial value in a bald head, but this value is by no means confined to the medical profession. Whatever advantages, however, it may confer on a "business young man," to a medical man, a fair estimate under favorable circumstances would be at the lowest, five hundred a year. The assumption of age and ripe philosophy which a man can safely indulge in, whose hair follicles upon the top of his head have in early manhood undergone a process of fatty degeneration, leaving a white expanse of reflecting integument, is a matter of common observation. The public are impressed by the appearance of things under these circumstances; a bald head will carry conviction to their minds when nothing else will—saving perhaps a flowing beard.

HISTORY OF THE MEDICAL PROFESSION.—Dr. Canniff has requested us to direct the attention of our readers to the announcement made some time ago of his earnest desire to obtain information relative to the early doctors of the Province of Ontario. He would be thankful for any facts in connection with any of them, or if any one would communicate to him

the names and addresses of any descendants to whom he might apply. He has already a biographical sketch of about seventy of these pioneers of the profession; but there is a number of whom he has very little information. It is his desire to make the work as complete as possible. The following is the announcement referred to:—

The descendants of the early doctors of Upper Canada will be interested to learn that there is being prepared an historical account of those pioneer practitioners, by Dr. Canniff, the author of "The Settlement of Upper Canada." The work will give an account of the several steps in legislation to secure a proper standing of the profession from the establishment of the Province of Upper Canada up to about the year 1850; 2nd, an account of the proceedings of the Upper Canada Medical Board; 3rd, a list of the medical men during that period, with biographical sketches. The doctor urgently requests that the descendants of these worthies will kindly furnish him at once with information on the following points:

1. Birthplace and date.
2. Place of medical study and the degrees.
3. Time of arrival in Canada.
4. Places where he practised.
5. Incidents in his professional life.
6. Marriage, children, and death.—*The Daily Globe*, 25th February, 1889.

DOCTOR RICORD.—It is interesting to know that Professor Ricord's pathway was variegated with many cross-lines. Like all good physicians he was most benevolent but possessed of such poor business abilities that in spite of his princely income he was frequently in debt, and several times in prison for the same. The Paris correspondent of the *Lancet* speaks thus of the last tribute paid to this illustrious specialist, who is stated to have feared that his future happiness might be marred by the importunities of those whose gleet was still uncured:

"The death of this well-known member of our profession, at the ripe age of eighty-nine removes one more of the links connecting the ends of two centuries. He was as well-known in the social as in the professional world. His funeral was one of the largest as well as one of the most imposing ceremonies of this kind which has taken place in Paris for some time past. It was timed

to start from his historic house in Rue de Tournon, at noon ; but, from the hour of ten, a considerable crowd literally invaded the street and its approaches. The large courtyard of the house was beautifully draped and converted into a *chapelle ardente*. At the foot of the coffin were placed on a velvet cushion his numerous decorations. At noon precisely the 4th Regiment of the Line, headed by its band, arrived, followed by a battery of the 31st Regiment of Artillery and a squadron of the 26th Dragoons armed with their lances. These military honors were rendered to the deceased doctor as a Grand Officer of the Legion of Honor. The *cortège* then set out headed by the military, while the band played Chopin's pathetic funeral march. Following these came a brigade of police under the orders of their officers. Immediately behind the hearse walked twelve religious sisters representing the various congregations which until recently supplied the nurses to the various Parisian hospitals. Next came the officers bearing the cushions of honor, on which were placed the various medals and orders. It goes without saying that the profession was strongly represented from all over France and even from the Argentine. The service at the church of St. Sulpice, which was entirely draped, was extremely impressive. The church, although large, was quite inadequate to contain the number of persons in attendance. During the service some beautiful pieces of music were rendered by a full choir, the organ of which was reinforced by the harp and other instruments. One of the most touching incidents here was the playing by M. Batta (an intimate friend of Dr. Ricord) on his violoncello of the "Adieux de Marie Stuart," a favorite musical *morceau* of his deceased friend. The religious ceremony over, the *cortège* re-formed in the same order and set out for Père la Chaise, where some eloquent parting words were delivered by Dr. Pean on behalf of the Academy of Medicine, and M. Peyron on behalf of the Assistance Publique."

Correspondence.

ANTIPYRIN IN FEVER.

Editors of CANADIAN PRACTITIONER.

SIRS,—In a paper read before the Ontario Medical Association by Dr. J. Thorburn, and

published in last month's issue of this journal, he lays down the indications for the administration of antipyrin in a brief and general way, calculated, I fear, to lead to serious disappointment should such a course be adopted by the young practitioner. Of course, Dr. Thorburn may say that his paper was not calculated for the guidance of the student, but as an expression of his views delivered before an assemblage of experienced physicians. I was unfortunately unable to be present at the discussion of his paper, owing to my engagement in the surgical section.

I think, however, that the experience of many physicians will agree with mine in showing that both antipyrin and antifebrin occasionally exhibit dangerously depressing effects upon the cardiac action, even when limited in dosage to 15 grs. and 5 grs. respectively.

With all due deference to the opinion of my old teacher, I should prefer to exhibit quinine as *the* antipyretic in the case of "wasted, feeble, or aged" patients.

In connection with this subject I have noticed on two occasions a peculiar idiosyncrasy displayed by a female patient respecting the effect of antipyrin given during an attack of typhoid fever, namely, moderate salivation ; an effect which I have not heard or seen mentioned by any teacher or author.

CHAS. M. SMITH, M.B., M.C., B.A.

Orangeville, Nov. 25, 1889.

A NEW DEGREE.

Editors of CANADIAN PRACTITIONER.

SIRS,—As the Medical Council has lately been making a praiseworthy effort to stamp out the travelling and advertising "specialist," and has so far succeeded as to afford such specialists a rich return in *free* advertising, it might be well for the Committee on Education to bring before the senates of Toronto, Trinity, Queen's, and McGill Universities the question of the advisability of granting a new degree to such of their respective graduates as may have proved themselves entitled to the distinction.

You are no doubt aware that we have "Solicitors in Chancery" ; now the new title proposed is that of "Solicitors in Medicine" ! Why, I am well acquainted with one or two practitioners within less than 150 miles from

Toronto, who are undoubtedly entitled to the appellation.

For instance, Dr. A. has been known to accost a parent purchasing some article for a sick child under the care of another practitioner, proffering his services, though unasked. He has also offered to attend a lady at her forthcoming accouchment for less than one half the fee charged by her regular attendant.

Dr. B., in order to secure a surgical case proposed to give all other services free for a year if permitted to operate.

Dr. C., in order to secure attendance on a case (prospective obstetrics!), offered to give advice gratis to the husband, who was afflicted with a bodily ailment.

Now are not these worthy aspirants for the new degree?

I have not yet invented a title for the Toronto physician who gruffly tells his patient from a distance, when asked by her if she should not receive treatment from her regular attendant on her return home, that she had all the treatment necessary after one topical application by himself, thus leading her to distrust the opinion of the local physician, who had insisted on the necessity of repeated treatment applied to the cervix, the case being one of cervical endometritis.

Is this the kind of treatment due the rural practitioner by his metropolitan confrère? I am inclined to think that the word "snob" would apply to such an individual.

Before concluding I may say that some of the members of the Medical Council would require to pluck some good-sized beans out of their own eyes in order to discover the motes in those of their fellow-practitioners in reference to the publishing of operations in the lay papers.

CATHARTICUS.

Book Notices.

Cyclopedia of the Diseases of Children, Medical and Surgical. By American, British and Canadian authors. Edited by John M. Keating, M.D. Philadelphia: J. B. Lippincott & Co., 1889.

We were pleased to speak in the highest terms of the first volume of this Cyclopedia, and we are glad to find that the same high standard of

excellence is found in the second volume. There are five parts.

1. Diseases of the Skin.—A series of articles written by well known Dermatologists of the United States and Canada, including Hyde of Chicago, Hardaway of St. Louis, Bulkley of New York, VanHarligan of Philadelphia, Graham of Toronto, Atkinson of Baltimore, and others.

2. Constitutional Diseases, and Diseases of Nutrition, including Scrofulosis by Ashby of Manchester, Eng., Tuberculosis by Jacobi of New York, Syphilis by Post of Boston, the Urinary Diathesis by the late J. Milner Fothergill of London, etc.

3. Diseases of the Respiratory Tract, including Diseases of the Nose by Worland MacKenzie of Baltimore, McCoy of Philadelphia, Delavan of New York, Carl Seiler of Philadelphia and others; the Pharynx, by Fletcher Ingals of Chicago, Beverley Robinson of New York, and Harrison Allen of Philadelphia; the Larynx, including Laryngeal Stenosis, Sajous of Philadelphia, Tumors of Larynx, by Sir Morell MacKenzie of London; Spasmodic Laryngitis, Pseudomembranous Laryngitis and Intubation by Northrup of New York; Tracheotomy by Wharton of Philadelphia; Diseases of the Lungs by Minot, Shattuck, Jacobi, Whittier, etc.

4. Diseases of the Circulatory, Hæmato-poietic, and Glandular Systems, Da Costa, Osler (who takes Congenital Affections of the Heart), Mitchell Bruce of London, Warren, Ashhurst, etc.

5. Diseases of the Mouth, Tongue and Jaws, by Roswell Park, Darby, Allchin, Thompson and Mears.

Books and Pamphlets Received.

Twentieth Annual Report of the State Board of Health of Massachusetts. Boston: Wright & Potter Printing Co.

Transactions of the Annual Meetings of the Kansas Academy of Science, with the reports of the Secretary, Topeka, Kansas.

A Reference Handbook of the Medical Sciences. Vol. viii. New York: Wm. Wood & Co., 56 and 58 Lafayette Place, 1889.

The Principles and Practice of Surgery. By John Ashhurst, jr., M.D. Fifth Edition. Philadelphia: Lea Brothers & Co., 1889.

Over-strain and Under-power of Brain. By C. H. Hughes, M.D., St. Louis, Mo. (Reprinted from the *Alienist and Neurologist*).

Chemistry, General, Medical and Pharmaceutical, including the Chemistry of the U. S. Pharmacopæia. By John Attfield. Philadelphia: Lea Brothers & Co., 1889.

Proceedings and Addresses at a Sanitary Convention held at Otsego, Mich., May 2nd and 3rd, 1889. Supplement to the report of the Michigan State Board of Health for the year 1889.

Personal.

DR. W. H. GROVES has entered upon practice with Dr. M. H. Aikins, Burnhamthorpe.

THE arrangement hitherto existing between Drs. Ryerson and Wishart has been dissolved by mutual consent. Dr. Wishart will continue to do special work (eye, ear, throat and nose) at his own office, 36 Carlton street.

Miscellaneous.

DR. JOSEPH WORKMAN.—Our worthy contemporary, the *American Journal of Insanity*, whose judgment of sane as well as of insane persons is usually quite sound, pays, in the April number, a well-deserved compliment to our highly esteemed and most worthy collaborator, Dr. Joseph Workman, of Toronto, who, from the foundation of the *Alienist and Neurologist*, has so faithfully and efficiently favored our pages with the always entertaining and valuable work of his industrious pen.

With the presentation of our collaborator's portrait, the *Journal* justly pronounces Dr. Workman "one of the most eminent of America's alienists." We cordially concur with our journalistic contemporary in its estimate of our distinguished collaborator, and take this occasion to make known our pleasure at this testimony of appreciation of our worthy colleague.

Truly, as the *Journal of Insanity* says, and as our readers have, on many occasions realized, is Dr. Workman gifted with a command of beautiful language, a wit as keen as a Damascus blade,

a perfect grasp of man's mental attitude and a profound knowledge of science, and "in medical circles his name is placed at the head of the list." "He is not only an accomplished scholar, but has a wonderful command of beautiful and terse English," all of which our pages fully confirm.

We cordially join our esteemed contemporary in wishing our friend peace and happiness commensurate with the good deeds that have proved the Golden Rule to be the simple creed of his life.—*The Alienist and Neurologist*.

R. Rhodes Reed, M.R.C.S., Norfolk, England, says: I have prescribed S. H. Kennedy's Extract *Pinus Canadensis* as an injection (one part to six), in an obstinate case of gonorrhœa, with very satisfactory results. The discharge considerably diminished during the first week, and after a fortnight's use the patient reported himself quite well.

We take pleasure in calling attention to the advertisement of Dr. A. J. Willard's popular Nervine Institution at Burlington, in this journal. The Sanitarium is pleasantly situated, is recent construction, and is complete in its appointments. This institution fills a place made necessary by the peculiar condition of the age—Nervous diseases are multiplying with the excessive strain upon the generation in new and many ways. These cases are difficult of treatment, and the most enlightened and scientific methods, with the best care, are none too favorable to be sought. These are to be found to a greater certainty, it is altogether probable, with Dr. Willard than elsewhere in this region. The doctor has been very successful in his specialty, and the patronage of his establishment, which has been large, is still increasing. Dr. Willard is highly educated, has enjoyed an extensive experience, and he furnishes the best of references, even if these were called for.—*St. Albans Messenger*.

Births, Marriages and Deaths.

BIRTHS.

NESBITT.—On the 10th of October, at 270 College street, the wife of Dr. W. Beattie Nesbitt, of a son.