stopped by the closure of the vessels from contraction of the tissue of the uterus itself. After delivery, we all recognise that the only proper thing to do is to empty out the clots and stimulate the uterus to contraction. Even after abortion, I look on the injection of styptics as a bad thing." In this sentence we have two entirely different forms of hæmorrhage spoken of, requiring as different modes of treatment; namely, hæmorrhage occurring after delivery at the full term of pregnancy, and that occurring after abortion; *i.e.*, before the termination of the fifth month. Now, with respect to the former, I agree with Dr. Thomas, that it "is the proper thing to stimulate the uterus to contract"; but though by many authors it is recognised as "the proper thing to empty out the clots" which form in the uterus, I much doubt if such a proceeding be always judicious. In many cases in which there is a tendency to *post partum* hæmorrhage, it is impossible to get the uterus to contract firmly; it contracts to a certain size, but any diminution beyond that point is but temporary, and it speedily relaxes again. Now, in such cases, the moment it relaxes hæmorrhage takes place into the uterus. If the uterus be not stimulated immediately to contract, coagula rapidly form round the mouths of the bleeding vessels. These coagula are Nature's plugs, formed by her to arrest for a short time the flow of blood, and give time for the tonic contraction of the uterus to occur. If we by our manipulation stimulate the uterus to contract, these coagula are thrown off, then the same process is repeated, and so the hæmorrhage may be kept up indefinitely; but if we remain content with the moderate contraction which Nature has established, retaining the hand on the fundus steadily to guard against undue relaxation, the coagula will, in the first instance, arrest the flow of blood, and then by their presence will stimulate the uterus to contract. That contraction, no doubt, expels them; but in all probability the contraction will now become permanent, and no further hæmorrhage will take place.

In such cases, if the treatment which I recommend, coupled with the judicious use of cold and the exhibition of ergot, fail to check the hæmorrhage, I have no hesitation in having recourse to the injection of the perchloride of iron; and in that other class—which, fortunately, is comparatively rare—in which the uterus becomes relaxed to such an extent that its very outline cannot be made out, I still more warmly advocate the use of the perchloride of iron, as being the only treatment which promises anything approaching to a certainty of success; but I am convinced that "the emptying out plan" is often most injurious.

Now, as to the hæmorrhage occurring *after* abortion, it very rarely is severe, unless a portion of the placenta be retained, and even then the amount lost is generally small; but, if it be necessary to check it entirely, that can be effected at once by the use of the plug. In these cases there is no risk of excessive intrauterine hæmorrhage, for the uterus can contain but a small quantity of blood, and will not relax to any extent.

But Dr. Thomas proceeds to relate a case of quite a different class, in which "a woman had been bleeding for three months after an abortion." "It seemed to me," he goes on to say, "that there must be something in the uterus to cause the flow, for otherwise, what is there in an abortion to keep up hæmorrhage for such a length of time in such a case? You may take it for granted that something has been left behind. The doctor in charge of the case consented to my dilating the cervix and introducing the curette. I took away a number of little bulbous bodies, remains of the placenta, those little granulations which bleed if you look at them, and pour out blood profusely if you touch them with a probe." This sentence is full of fallacies. I am far from admitting "that it may be taken for granted" that, because hæmorrhage persists for weeks after an abortion, therefore "something must have been left behind"; and to his query, "What else is there in an abortion to keep up hæmorrhage?" I reply, that frequently granular erosion of the cervix, or subinvolution of the uterus, is met with as a consequence of abortion, and that either, or possibly both conjointly, were present in the case which he relates, and were the cause of the long-continued hæmorrhage. I think Dr. Thomas proves this for me; for he goes on to say that he introduced a curette, having previously dilated the cervix uteri; but did he find, on doing so, a portion of placenta, or of the membranes, remaining? No such thing; but "he scraped off a number of little bulbous bodies, remains of the placenta, those little granulations which pour out blood when you touch them with a probe." Are we to understand from this that Dr. Thomas asserts that the placenta, which is a product of conception, and in no way forming a portion of the uterus, is capable of giving origin to "granulations"? Such a view of the pathology of uterine disease is altogether new, and will not, I fear, stand the test of scientific investigation. In my opinion, the case just related was an ordinary case of subinvolution of the uterus; that the so-called "granulations, the remains of the placenta," were but portions of the mucous membrane lining the cavity and cervix

uteri, thickened and hypertrophied; that, by scraping the unhealthy surface with the curette, he stimulated the entire organ; and that healthy interstitial absorption followed. If such a case had presented itself to me, I should adopt a practice which I have followed on several occasions with success, namely, to introduce up to the furthest point of the uterine cavity, by means of Simpson's "porte caustique," eight or ten grains of the solid nitrate of silver, which, dissolving, would blister the entire of the intrauterine mucous membrane. This treatment, if carried out with due caution, is perfectly safe. It causes some pain, seldom, however, severe, and sometimes a little hæmorrhage follows; but, if care be taken to keep the patient in bed for a few days, and nothing but mild unstimulating diet allowed, I believe it to be perfectly safe, and it is generally followed by a permanent cure. It is very analogous to that which Dr. Thomas mentions as having been recommended by Dr. Lente, but it is more certain than his method. As to the instrument called the "curette", I altogether condemn its use under any circumstance.

There is one other matter introduced by Dr. Thomas which is open to comment. He relates the particulars of a case which terminated fatally after the introduction into the uterus of three of Dr. Peaslee's dilators. These are steel instruments, and act mechanically, and of course rapidly, the very rapidity of their action being the point which Dr. Peaslee insists on as being satisfactory. This is the very principle to which I object. No matter how scientifically used, rapid dilatation of the cervix is not a safe proceeding, and there is always considerable risk of doing injury to the uterine tissues.

For my own part, I invariably adopt the plan which is, I believe, followed universally in the Dublin School of Obstetric Surgery, of dilating the cervix uteri with sea-tangle tents; they exert a slow and continuous pressure from within outwards, and their use has never, so far as I am aware, been followed by any injurious consequences. But even these I never think of using without confining the patient to bed. The American practice seems to be to dilate the cervix at the physician's residence; at least, Dr. Thomas's patient returned home after the operation, and the fatal effects which followed may possibly have been in no small degree attributable to want of due care in this particular.

THE VALUE OF THE LIQUOR OF THE PERNITRATE OF IRON, IN COMBINATION WITH CALUMBA, IN CASES OF CHRONIC MUCOUS DIARRHŒA.

By EDWARD J. COOKE, A.B., M.B.T.C.D.; Surgeon to the Workshop Dispensary and Cottage Hospital.

THE following facts may be interesting to some members of the profession, as affording evidence as to the use of the liquor ferri pernitratæ, in combination with calumba, in cases of chronic mucous diarrhœa, which mode of treatment was, I believe, first recommended by the late Dr. Graves of Dublin.

CASE I.—In April last, a married woman, aged 34, applied to me for advice relative to a most troublesome diarrhœa, which gave her much annoyance. She stated that shortly after her last confinement, which was some months previous to her application, she began to suffer from pain and uneasiness in her bowels, followed shortly afterwards by diarrhœa, which got better for short periods and then broke out again, each fresh attack being more severe than the previous one. She had taken several mixtures from the druggists' shops, almost without any relief; and when she came under my care she was purged daily eight or ten times, which had necessarily much reduced her in strength. I treated her at first with castor-oil and compound tincture of rhubarb to remove any foreign body, if anything existed as such, from the mucous membrane of the intestinal tract. This treatment caused much tenesmus and uneasiness. I then tried almost all the vegetable astringents, but without effect. I then put her on sulphuric acid and opium, but with alike result. Acetate of lead and opium appeared to check it somewhat, but not satisfactorily. At last I examined the excreta, and found that they were passed in small quantities, each evacuation being mixed with mucous shreds. I put her on fifteen-minim doses of liquor ferri pernitratæ, with one ounce of infusion of calumba, every three or four hours; and in about a week she went from under my care perfectly well.

CASE II.—About the first week in October, I had under my care a somewhat similar case of a woman aged 53, who for months previous to her application had been much troubled with diarrhœa, which gradually became worse. When she applied to me she was much reduced in strength, and stated that her bowels were moved on an average twelve or thirteen times daily; no mixture that she got previously

from the druggists' shops doing her any permanent good. Having examined her evacuations, I found that they were small in quantity, and contained mucous shreds. I at once put her on the same treatment as in the former case (of course regulating the diet in each), and in less than a fortnight she left perfectly well.

I could mention other cases of a similar nature treated most successfully in this manner, but I would be taking up too much valuable space. I may mention, however, that out of upwards of five hundred cases of diarrhoea which have come under my care since June last, some few have assumed the chronic mucous form, though not to the same extent as the cases above recorded; and my experience is this, that in the combination of the liquor ferri pernitrat with calumba, we possess a most invaluable remedy in the treatment of this form of diarrhoea, and most particularly when met with in persons who are constitutionally weak; the iron in such case curing the diarrhoea as much, perhaps, by its strengthening as by its astringent effect. I have seen a few cases in which this treatment has not succeeded as satisfactorily as one would wish, the iron sometimes causing nausea, etc.; such cases being, however, very exceptional.

In conclusion, I may state that I have never known a relapse in any case I have ever seen treated successfully; and that when this combination is applied to the form of diarrhoea above mentioned, its application will, as a rule, be attended with the happiest results.

ON PARALYSIS IN RELATION TO TREATMENT.*

By D. DE BERDT HOVELL, F.R.C.S.E., Clapton.

INDEFATIGABLE research has still left much concerning this disease undetermined, and some discovered points require confirmation. The locality once assigned to aphasia has been subverted and disproved; and, although Dr. H. Maudsley has recently given to volition "a local habitation and a name" in the supreme cerebral centres, that important faculty does not readily accept a definite location, and continues to hold an uncertain position between the material and immaterial.

The medical treatment of a disease whose precise conditions are still imperfectly ascertained must necessarily partake of the same imperfect character. The object of this paper is briefly—for time admits of a mere outline—to refer the application of usual remedies to a simple classification of the recognised forms of the disease.

In this country, paralysis is generally understood to represent loss of muscular power, not necessarily associated with loss of sensation, affecting a certain part. The correctness of the nomenclature which attributed the death of the late Emperor of Russia to "paralysis of the lungs" was generally considered to be questionable. At the same time, it might be said with propriety that the effect of enteritis is to cause "paralysis of the bowel." I propose to accept the definition of Dr. Aitken, who says, "As a co-relative statement, it may be written, that whatever interferes materially with the generating power of nerve-vesicle, or the conducting power of nerve-fibre, constitutes a paralyzing lesion."

Before the time of Sir Charles Bell, Prochaska, and Dr. Marshall Hall, all forms of paralysis were referred to lesion of the brain; the independent faculty of excito-motory action, the special attribute of the medulla, not having been ascertained. This was followed by the recognition of the particular form known by the term reflex paralysis, which implies that the cause of paralysis does not exist in the nerve-centre, but is referred to it. Leaving this, however, for future notice, we pass on to another form of paralysis, which I propose to consider as a third division; namely, that from concussion or shock, the most familiar form of which results from railway accidents. One peculiar feature of this class of cases is, that the results do not follow immediately, but after the lapse of a shorter or longer time. "The collapse," which is, of course, immediate, "is accompanied by insensibility, but without evidence of injury to the head. Reaction is tardy and irregular, attended with numbness and tingling. Other symptoms are, rigor, continued sickness, spasm of the limbs, throbbing sensations, want of sleep or continued drowsiness, enfeebled muscular power, deafness, defective sight, ocular spectra, hyperæsthesia, great emotional excitability. Some of these patients entirely recover; in others, the health is permanently enfeebled." The effect of physical shock *per se* is attributed by Mr. Le Gros Clark to the vaso-motory system. To the circumstance that some interval of time elapses between the action of the cause and its effects, is probably due the fact that the results of this

form of injury have not met with their due recognition, but have been received with doubt and incredulity. It thus becomes evident that accidents attended or followed by loss of consciousness and functional power must not only be regarded with reference to injury to the brain and medulla, but also to the effects of shock, expressed in its effects on the third great nerve-centre—the vaso-motory system. But there is another form of shock similar, if not, indeed, identical, in respect of the effects produced by physical shock: I mean moral shock. And there are many reasons for attributing the seat of this injurious action to the same division of the nervous system—the sympathetic or vaso-motory. There are always hesitation and difficulty in acknowledging truths which we do not see, because they are not immediately subjected to faithful sight; and to this is probably due the fact that the effects of moral as well as physical shock until recently have not met with due recognition. The following history, although not derived from medical works, was yet "written for our learning".

"And lo! Eli sat by the wayside watching, for his heart trembled for the ark of God. And there ran a man of Benjamin out of the army with his clothes rent," etc. "And the messenger said, 'Israel is fled, and thy two sons, Hophni and Phineas, are dead; and the ark of God is taken.' And it came to pass, when he made mention of the ark of God, that Eli fell off the seat backwards, and his neck brake, and he died. And his daughter-in-law was with child, near to be delivered; and, when she heard the tidings, she bowed her head and travailed."

It is impossible not to admit the loss of controlling power which ensued upon moral shock in both these instances. The effect of shock, both physical and moral, although it comes within the definition of paralysis given above, would be better represented by the term paresis, which implies the remission or letting-down of strength or nerve-power. Unfortunately, this term has been somewhat prematurely appropriated by the alienists, and has been brought to represent a particular form of insanity. We are thus driven to adopt the term neurosis, which is almost synonymous. Both words may be considered to mean a condition of the nervous system predisposing to, rather than actually causing, that loss of function which is generally understood by paralysis. Insolation, or heat-stroke, which is generally unattended by paralysis, may be quoted as an instance of this.

We pass on to consider the conditions producing paralysis a little more in detail.

I. In a state of health, we are quite unconscious of the generation of nerve-power. It is not until some interruption or deviation from the normal supply takes place, that our attention is called to it individually or professionally. As, on the one hand, nerve-power is essential to regulate the circulation of the blood, so, on the other, a normal supply of healthy blood is indispensable to the generation of a normal supply of nerve-power. Thus irregularity of circulation and the attendant alterations of structure constitute the first cause of that interrupted supply of nerve-power and consequent failure of function which has long been designated paralysis. In proportion as the morbid state or injury thus induced makes alteration of structure permanent or complete, treatment becomes of correspondingly little avail. Apoplexy is perhaps the most familiar cause of paralysis so induced, by causing lesion of a nerve-centre. But this division also includes all forms of congestion of nerve-centres, of anæmia, spanæmia, toxæmia; all forms of paralysis connected with cardiac disease and disturbance, renal and hepatic complications. It follows as a necessary consequence that, in the very large proportion of cases comprehended in the division, not only the brain and medulla are concerned, but the sympathetic also, and, according to the late researches of Dr. Meryon, especially the terminal motor fibres which supply the arterioles, and the fibres of Remak, or sympathetic proper, which regulate cell-secretion and nutrition. I must here ask permission to digress for one minute, in order to notice the question between vital force and nerve-power, on which the opinions of the profession have been divided. It has been asserted that there is no *vis medicatrix nature*—no special vital force. The dead body has the properties of inanimate matter; it still has nerves, but no nerve-power. The living body has the properties of animate as well as of inanimate matter; the properties of animate matter are essentially vital, depend upon nerve-power, and are regulated by it; they do not exist the one without the other, and practically are simply identical. Vital power finds its expression by means of nerve-power; and the *vis medicatrix nature* is simply the resumption of the normal action of nerve-power, which has been deranged by abnormal causes.

II. Interruptions of supply, owing (1) to lesion or other imperfection of conducting media, or (2) to diversion or disturbance of nerve-power properly generated and supplied, constitute the next division of paralysis which presents itself for consideration. The arm or leg falling asleep from pressure in an after-dinner nap is the most familiar form of the one, irritation of the other. Irritation is a term somewhat difficult to

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