the darkness of empiricism. Individual and combined effort will, I trust, rapidly bring more light.

Not the least important branch of scientific education is, in my humble judgment, a practical acquaintance with instrumental manipulation. I speak not of the surgeon's appliances—those are an obvious necessity; but of an early familiarity with such agencies as electrolysis, blowpipe analysis, or, above all, the microscope. The first of these—electrolysis—offers a wide field of information to the student. The secondary compounds formed at the poles of a voltaic battery, particularly with organic substances, are most curious and instructive objects of investigation. Blowpipe analysis is also most useful, and the apparatus may always be at hand. As to the microscope, the physiologist's *valde mecum*, I need not insist on its value. More is learned in an hour by the study of one of these, well explained, than by months of reading. Manipulation, moreover, should be learned young: the hand and head thus learn reciprocally to aid each other.

A few words on hospitals. They are, in my humble judgment, the only charities for which I would not have a prohibitory law of mortmain, not suddenly but gradually, introduced. Mortuary endowments are apt to transmit and clothe with authority the errors of past times; they are apt to be the offspring of caprice or undue persuasion, so likely to be uneconomically conducted. There are no living vigilant subscribers to scrutinise the application of their funds; and the reproach to a complainant is ever ready, "Why should you interfere? we are not dealing with your money." I cannot recognise the right or advantage of any man being able by a mere flourish of his pen at some particular period of his life, and that generally when his faculties are not in their best state, to dictate how men should act in a distant future, the requirements of which he cannot know, and when he himself would probably have entirely changed his views. Speaking for myself, I would, as a general rule, let the charities (I use the word in its wide legal acceptance) of the day be supported by the people of the day; but I incline to except hospitals for the sick, the infirm, and the deranged; because they are managed by the gratuitous services of medical men; because they afford help to those who most require and can least misuse it; because they are tied to no formulae, but call into action the most advanced knowledge of the day; because they form the most valuable school for the most valuable knowledge; and because (though this may be common to other charities) they require a permanent local habitation. My observations on endowments are not intended to apply to untrammelled gifts by living men. The test of parting with property, and giving up its enjoyment, by the living and healthy owner, is a tolerable security against some of the abuses I have indicated. The number of Peabodys, moreover, will never probably be excessive; but even their gifts should be subject to control, and the State should always have a power of direction and interference.

St. Mary's Hospital and School are, I believe, unendowed; so my words have no present application here; but, having often discussed the subject with eminent men, I take this opportunity of expressing my notions, though much more briefly than the subject demands.

The clock warns me that I must conclude. After delivering prizes, the gaining of which has depended solely on merit, I may be expected to end with the usual encouraging peroration, that industry and ability command success; but I cannot, except in a modified form, agree to this copy-book maxim, when applied to your future struggles with the world. Doubtless, few who are prudent, energetic, and industrious, fail to attain some fair degree of worldly success; but the race is not always to the swift, or the battle to the strong. Circumstances affect efforts, promoting, arresting, or diverting them. The road to success is often that which a high-minded man cannot travel; he cannot learn to fetch and carry, to subserve the interest of a patron or a mob. I do not seek to undervalue success: duty to yourselves and those whom you may bring into the world enjoin its pursuit in moderation. But I would fain endeavour to inculcate upon my younger hearers a higher motive than the mere hope of fame, wealth, or power. If these come by an unswerving career, make good use of them; if not, console yourselves with the conviction that those who are said to be in power are frequently the veriest slaves in existence; that the improvement of our race is more promoted by those who think than by those who act; that some degree of martyrdom—not that which trumpets its sufferings, but silent, proud, unappreciated martyrdom—is commonly the lot of those whose labour tends most to advance mankind, for upon them rests the burden of opposing existing prejudices, and unsettling vested interests. Have courage to risk this. Your most noble profession offers the grandest field for human exertion—the widest scope for progressive improvement. To assuage human anguish, to restore the child to the parent, the husband to the wife; to convert despair into hope and hope into fruition, will be often your lot; to see the least selfish parts of our common humanity; to teach how the in-

dividual, how society, may be regulated, so as to produce the greatest sources of happiness—sound minds in sound bodies—belongs to yours more than of any other calling. You will meet with hard rebuffs, but "in the reproof of chance lies the true proof of men." Meet failure without repining, and success without exulting. Have but one rule of life, "Fais ce que je dois, advienne que pourra."

ON THE USE OF OBSTETRIC INSTRUMENTS.*

By JOSEPH GRIFFITHS SWAYNE, M.D.,

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HAVING, on a former occasion, described the instruments used for dilating the os uteri during the first stage of labour, I now pass on to those which are employed to aid the descent of the child's head during the second stage. The fillet, an instrument formerly much employed in midwifery, was a band of silk, cord, or leather, with the addition of a piece of cane or whalebone to facilitate introduction. It was passed over the chin, or some prominent part of the head, and used as a simple tractor. But as it is now obsolete, having long ago been condemned by accoucheurs as inefficient, I need make no further allusion to it, but proceed to describe those instruments which are now in very general use.

The vectis, although in every way inferior to the forceps, is still very much resorted to by some practitioners. It acts both as a lever and a tractor, and the chief advantage it possesses is the facility with which it can be introduced. This, however, is a very small set-off against its proved and acknowledged inefficiency. It is not capable of being used with sufficient power to effect delivery when labour pains are absent; and even when pains are present, it is of little avail when rapid delivery is necessary. The instrument is of most service, I think, when we wish to correct malpositions of the head. For instance, I have found it very serviceable in presentations of the brow, where, as is generally the case, it is found impossible to push up the forehead so as to allow the occiput to come down. By passing up the vectis over the chin, that part may be brought down, and the presentation altered into one of the face, which is in every respect more favourable. Or again, in face-presentations, if the chin be turned towards the hollow of the sacrum and do not readily engage itself underneath the pubic arch, it may be brought round into that position by the vectis. Also, when the head presents with the forehead in the anterior semicircle of the pelvis, we may often succeed by means of the vectis in bringing that part round into the posterior semicircle. Where, however, it is necessary to assist delivery, because the head is arrested during its descent through the pelvis, the vectis is a singularly inefficient instrument. If used as a tractor only, it is almost sure to slip if much traction be made; and if as a lever only, it is unsafe unless we make the hand a fulcrum, and then there is very little power, because the hand is not a sufficiently fixed point. The best method of employing this instrument, both as a lever and as a tractor, has been explained by Dr. Robert Barnes, in one of the excellent series of Lectures on Obstetric Operations, which have been lately published by him in the *Medical Times and Gazette*. He points out that the vectis should first be applied over the occiput, and that part drawn down until it is lower than the vertex, and then that it should be applied posteriorly over the forehead and the same manœuvre executed, until, at last, the head is brought down through the outlet of the pelvis. In using the vectis, however, it must be remembered that we depend very much on the co-operation of the labour-pains; and the first result of the operation I have just described is, to convert the ordinary presentation of the vertex into one of the occiput, which, all who have had much experience of these cases know, is not nearly so favourable. The same thing may be said when the forehead has been depressed by the vectis, so that it may well be questioned whether we do not impede nature more, by rendering the presentation less favourable, than we assist her by our extractive efforts. For my own part, I am quite convinced that, when the head is arrested in its course, and the necessity of instrumental interference has been once decided upon, it is far better to have recourse immediately to the most efficient instrument, viz., the forceps, than first to waste time by making efforts with the vectis, which very probably will prove ineffectual, and at last be obliged to use the forceps under less favourable circumstances. For these reasons, I never now use the vectis, except to correct malpresentations.

The instrument, beyond all others, on which the accoucheur depends, is the forceps. No better evidence of its value can be adduced than was afforded by the vast number of specimens shown at the London Exhi-

* Read before the Bath and Bristol Branch.

bition of Obstetric Instruments in 1866. The amount of ingenuity which must have been expended in contriving almost endless modifications of so simple a form was certainly something marvellous. And there is, perhaps, no one feature which so favourably distinguishes the midwifery of the present day, as the almost universal consent with which the great importance of this instrument has been recognised and acted upon. In this respect there has been a remarkable reaction, from the over-cautious practice which prevailed towards the end of the last century, and which was due, in a great measure, to the influence and example of the illustrious Denman. He had no doubt been a frequent witness of evils resulting from the abuse of this instrument, in the hands of ignorant and incompetent practitioners, at a time when there were no examinations in midwifery, and when the science of obstetrics was despised by the medical colleges. Accordingly, accoucheurs were taught by his example and precept to place implicit confidence in the powers of nature, and never to resort to instruments, unless they had the most plain and palpable evidence that she was unequal to her task. These doctrines of non-interference were, however, pushed to their extreme point by Denman, and may be said to have culminated in that rule so fraught with danger; viz., that the head of the child should have rested for six hours as low as the perineum (*i.e.*, in a situation which would allow of their application), before the forceps are applied, although the pains should have altogether ceased during that time. "In this particular, no doubt, his prudence was so excessive that it became a great fault; but, in other respects, his doctrine had a most salutary effect in their time, and served to inculcate the wholesome maxim, 'Meddlesome midwifery is bad'; which has now become one of the canons of obstetric practice. General rules of this kind, however, must bear some relation to the average capacity of the practitioners who have to carry them out; and, in the present day, when medical men are so much better instructed, especially in midwifery, it is but reasonable to allow a greater latitude of interpretation. This has practically been the case; and, in the present day, we find that the forceps is resorted to much more frequently in difficult labour; and, as experience proves, with the best possible results. In support of what I am saying, I may refer to a paper "On the more Frequent Use of the Forceps," by Mr. Philip Harper, which appeared in 1860, in the first volume of the *Obstetrical Transactions*. In this paper, Mr. Harper points out, from three tables of statistics of the Dublin Lying-in Hospital, drawn up severally by Dr. Collins, Drs. Hardy and McClintock, and Drs. Johnston and Sinclair, that the maternal deaths steadily decrease as the forceps is more frequently and earlier used. Under Dr. Collins, the forceps was used very sparingly; whilst under Drs. Johnson and Sinclair it was used very freely; and, as the event proved, with the best results, both to mother and child. Mr. Harper's own statistics are still more favourable, although, in a total of 6053 cases, the forceps was used 232 times, or as often as once in twenty-six cases. According to Sir James Simpson (*Obstetric Works*, vol. i, p. 855), the forceps has been used much more frequently than this by some of the German accoucheurs; for instance, as often as once in fourteen cases by Carus of Dresden; once in twelve by Busch of Berlin; and once in seven by Siebold of Berlin. Although I do not think myself that so frequent a use of the forceps is desirable, yet I consider that it is abundantly proved that the maternal mortality is less after the use of the forceps than after unassisted tedious labour. With regard to my own practice, I may say that I now make it a general rule to apply the forceps when the head has remained immovable in the pelvic cavity for more than two hours; and this, quite irrespectively of the condition of the mother. At the same time, I am quite of the opinion of Dr. Collins, that, "so long as the head advances ever so slowly, the patient's pulse continues good, the abdomen free from pain on pressure, and no obstruction to the removal of the urine, interference should not be attempted, unless the child be dead."

As, in all the statements which I bring forward respecting the use of obstetric instruments, I wish, as much as possible, to draw upon my own experience, I will now quote some statistics from my own practice to show what are the causes which render the use of the forceps necessary, or, at all events, advisable. Since I have been engaged in midwifery practice, I have used the forceps ninety times; and I find that, out of the ninety cases recorded by me, sixty-nine, or more than three-fourths, were primipare. This result is what would naturally be expected; for, in most forceps cases, there is both increased resistance and diminished uterine power; and the former element is especially present in first labours, where rigidity of the soft parts is superadded to other causes of resistance; and, above all others, it is present in women who have passed the period of youth. Amongst the sixty-nine primipare, there are ten women whose respective ages range from thirty-eight to forty-three.

I shall next arrange the causes in the order of their respective frequency.

1. By far the most frequent cause is a want of power, and slight

want of room in the pelvis. Of this, there were forty-one cases out of the ninety.

2. Want of power only. Of this, there were twenty-two out of ninety.

3. Want of room only. Of this, there were twenty-one.

4. Convulsions. Of this, there were four cases.

5. Prolapse of cord. Of this, there were only two instances.

The results of the ninety forceps cases I have recorded show that, as Mr. Harper insists, the operation is not necessarily a dangerous one; although I have used the forceps more frequently than would be sanctioned by the old established rules of midwifery. There were four maternal deaths in all; a proportion which is rather less than that usually met with in British practice, according to Dr. Churchill's tables. These gave one death in 20½ cases, as the average mortality attending the use of the forceps in Great Britain. In the four fatal cases which I mentioned, the deaths were due in two to puerperal fever; in a third, to bronchitis; and, in a fourth, to malignant scarlatina. In these last two the deaths were in no way traceable to the use of the forceps—a circumstance which, if taken into consideration, would make the results appear still more favourable. With respect to the infant mortality in my ninety cases, I find that fifteen children were still-born, and seventy-five born alive—so that one child in six was lost instead of one in four, which is stated by Dr. Churchill to be the average mortality of children delivered by the forceps.

With respect to the instrument employed in these cases, I may mention that in by far the greater number it was the short forceps recommended by Sir J. Simpson. This instrument has not a great compressing power, and it has a long shank between the fenestra and lock. In consequence of this peculiarity, it can be used when the head is quite high in the pelvic cavity, and yet the lock will be clear of the perineum. The handles also are very short, so that the whole instrument is not unduly lengthened by the elongation of the shank. Some loss of lever power is thereby occasioned, but this is not a matter of much consequence in using the short forceps, and it is very undesirable that the handles should be unduly long, because, if they are, they are very much in the way, and, especially if she be restless or convulsed. The long forceps which I generally use has handles of the ordinary shape, and blades with a lateral curve, and very similar to those of Sir J. Simpson's long forceps, and are always coming in contact with the bed or the limbs of the patient.

The next subject for our attention will be the best mode of applying the forceps; but as this will occupy much time, I must defer it until some future occasion.

ON CARCINOMA OF THE LIVER.*

By JOHN RICHARD WARDELL, M.D., F.R.C.P.,

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NOT long ago, another illustration of the manner in which hepatic malignancy may be resembled came under my notice; and I may here not inaptly cite a few facts from the copious notes of this case, which now lie before me. In the latter part of September last, I was requested to visit a married lady of nervo-biliary temperament, 50 years of age, who had lost flesh, and who had become pale and anæmic. She had not long before sustained a bereavement which had given a shock to her constitution, and thrown her into ill-health. She had on previous occasions been under my care for attacks of cardiac asthma, which came on after any unusual cause of excitement. She complained of epigastric pains which darted into the right hypochondrium, of nausea, loss of appetite, and general *malaise*. The liver descended below the false ribs, and it could be traced above the fifth interspace. The epigastrium was full and round. The thorax presented rachitic antero-posterior flattening. At the date now spoken of there was no pulmonary distress, nor any auscultatory signs of phthisis. The tongue was flabby, but clean; the alvine and renal excretions were dark. The urine was very acid, and contained bile-pigment. She had lost some blood by hæmorrhoids, and there was a waxy, yellowish, cachectic look in her features. The epigastric pain, hypochondriac aching, flatulence, and nausea with occasional sour vomitings, were cardinal and continued symptoms. The varied treatment to which she was subjected gave not more than temporary benefit. In the latter part of November, there was some dulness in the upper third of both lungs, which was accompanied with slight bronchophonic resonance, and some patches of moist crepitation. The cough was very trifling, and the sputa only consisted of occasional expectorations of glairy mucus, with some purulent streaks. The nausea, sour eructations, flatulence, occasional vomiting, epigastric pain, and

* Concluded from page 465 of last number.