some of the muscles of the trunk as well as of the arm; it was comparatively early in its appearance; it varied in intensity at different times; and it has been, if anything, increased by the galvanic stimulus, when this has been applied. This difference is due, in Antill's case, to the commencing atrophy of the muscles which so constantly occurs in paralysed parts, and through which the muscular tissue wastes, leaving only the fascia and intervening fibrous tissue; and this, being devoid of elasticity, undergoes a steadily progressive contraction. The improvement under the galvanic action has been a further proof of this, shewing the return of the nutrition of the muscular tissue; and, as this has coincided with an improvement in his cerebral state, he has, in consequence, gradually regained his voluntary control over the motor action. The means by which this latter is accomplished is a question of very interesting features, but one upon which I cannot now enter. I believe, however, that, in the majority of cases in which late rigidity occurs after hæmorrhage, it is due to this cause. It is, however, I must tell you, believed to be occasionally due to inflammatory action arising around the clot. In such cases it approximates to the tonic contraction seen in Hines, which arises from inflammatory action affecting the meninges and the brain-substance surrounding the softened portion. It frequently affects also the lower limb, though this is not seen in the present instance.

Both these cases present certain points of resemblance in respect of the state of the vascular system, and this always deserves attention in cases of hemiplegic apoplexy. I have already told you that the states of the vessels giving rise to softening and to hæmorrhage are in many cases very similar. The state of the heart may, however, be sometimes a guide in cases where the symptoms are of a doubtful nature. The existence of cardiac hypertrophy or of disease of the tricuspid valve may afford a presumption that the nature of the cerebral lesion is hæmorrhagic. Disease of the aortic or mitral valve, especially if originating in rheumatism, would raise a well founded suspicion that hemiplegic apoplexy originated in the obstruction of the middle cerebral artery by a fibrinous coagulum carried from the left ventricle. The manner of the attack may also aid you, though in both these cases we could obtain no information on these points. Hæmorrhage is often preceded or accompanied by fulness of the vessels of the head, by flushing of the face, and heat of head. In softening, these signs are usually absent; the face may be pale, and the circulation is often depressed. Later, however, signs of "determination" may supervene, even in the latter disorder, though the mechanism of their production is not very evident. They are not improbably determined by a reflex effect, causing distension of the vessels in the attempt to establish the collateral circulation.

There are several minor points connected with the pathology of both these disorders which, though of considerable interest, I am compelled to pass by for the present. I wish, however, to direct your attention to some points of importance to which the pathology of these affections, considered in regard to diagnosis, leads us in relation to their treatment, though I can only now discuss them briefly and somewhat summarily.

In the first form of senile softening, our main indications are rest, the preservation of the normal tone of the circulation, and the avoidance of causes of cerebral hyperæmia, which may lead to the rupture of vessels in the softened parts. Bleeding and counterirritation are equally out of place and useless. Nutritious food and stimulants, administered with great caution, are the measures chiefly to be relied on. With these must be combined the maintenance of the nutrition of the paralysed limbs by friction, by passive motion, and by galvanism, until the nutrition of the brain is restored or the action of the injured portions is supplemented by that of adjacent parts. Lastly, the action of the bowels must be gently regulated, since a costive condition of these is one frequent cause of cerebral congestion. Cases of hæmorrhage, when coming before you after the active part of the attack has subsided, are to be treated in a very similar manner. You cannot remove or diminish the pressure of the clot by depletion, counterirritation, or antiphlogistic measures; and by lowering the patient you only weaken his reparative powers. When seen early, and there are signs of a determination of blood to the head, you may in some cases possibly diminish the amount of extravasation by general or local bleeding and revulsives to the extremities. If the case be seen after this has passed, though comparative inaction on your part is harder to practise in the presence of a threatening disease than what may appear to the friends more vigorous measures, this is in the majority of cases the more philosophical and the safer treatment. You have seen the benefit of rest and galvanism in the case of Antill: this is fortunately an example of which you will meet with many instances; though in others of greater severity the paralysis of the arm may be more permanent than it has been in his case.

In cases of softening from obstruction of the artery, your treatment may also be guided in part by the state of the circulation. You cannot reopen the obstructed vessel; and the compensating hyperæmia in the adjacent parts is in a measure only in accordance with a natural and

well known physiological process. It is, however, within your province to see that this does not overstep salutary limits. I need hardly tell you that venesection in the initial stages of the attack is likely to prove positively injurious. If, however, you observe signs of subsequent excessive determination, you may control this by cold, or occasionally by topical bleeding and counterirritation, by which means you may endeavour to limit the excessive dilatation of the vessels by acting on the peripheral extremities of the spinal nerves. Moderate purgation is also admissible in such cases. I believe that no good is effected by the use of mercurials; but the other indications for rest and nutritious food are called for in this as in the other affections of which I have spoken.

THE CLOSING OF BLEEDING BLOOD-VESSELS BY ARTERIAL FORCEPS.

By WILLIAM TAYLOR, M.D., Edinburgh.

MY attention has been directed to an article in the BRITISH MEDICAL JOURNAL, entitled "A New Method of closing Bleeding Blood-vessels by Moveable Forceps. By Thomas Nunneley," etc.

The experiments therein recorded bear a close resemblance to a series in which I was engaged, while a pupil of Sir James Simpson, two years ago; and the results of which I had then the honour of submitting to him and to Professor Spence. These, although not published then, were embodied in a thesis written shortly afterwards, and presented to the Medical Faculty of the University of Edinburgh in March 1866.

From a rough draft of that paper which I have by me, I make the following extract; and I think the "acupressor arteriæ" therein described will be found to supply the desideratum which Mr. Nunneley requires.

Extract from Thesis.—This may be regarded as emphatically the iron age in surgery. The knife has, in a great measure, supplanted the caustic-holder, the metallic suture, the silken seam; and now acupressure threatens the extinction of the ligature. We cannot have too many changes, provided that each be an improvement on that which went before; and, as acupressure is manifestly a step in the right direction, let us lend our aid in bringing it as near to perfection as possible. A healthy cicatrix is a far prettier sight than a suppurating sore, and a week's superintendence far preferable to a month's dressing; and if such benefit to our patient and such pleasure to ourselves can by any means be obtained, even once out of a hundred times, I hold it to be our duty to give him the full benefit of that chance. But the advocates of acupressure expect—and I think reasonably—far higher triumphs than these; they expect to see at least fifty per cent. of their patients benefited by its use; and they have the pleasing reflection that those wounds which fail to heal by first intention under its application, belong to a class the healing of which is not by any means favoured by the ligature.

Although convinced of the supracellence of acupressure, I confess that, like many others, I have failed to see the possibility of its universal application, more especially to the deeper seated parts; and, although firmly believing that the ligature is most certainly doomed to disappear from our vision within half a dozen years, still I think it probable that something besides the straight needle, but made to act on the same principle, will be required to aid in supplanting it.

Acting under these convictions, I set myself to devise a method whereby all the advantages of acupressure might be applied not only in regions where direct pressure from a straight needle would be unattainable, but also in parts which are fairly accessible. The result has been the construction of a self-acting wire-compress, which I have dignified with the name of the "acupressor arteriæ". This minute piece of mechanism is so constructed as to retain a firm hold of the artery, and, although hid from view by being enclosed within the divided tissues, it can be removed at pleasure any time after the operation. It is, therefore, tantamount to a metallic ligature, for the separation of which we have not to wait for two, three, or four weeks, but which can be removed at any moment without the slightest trouble. It consists of a needle, or rather a piece of steel wire, bent upon itself in the middle and turned into a single spiral, which constitutes a spring; the extremities are so adjusted that, by the aid of the spring, they lay hold of the artery to be compressed. The compress is then left in the wound, but connected with the spiral at the end is a small wire; this is allowed to hang out in the same manner as the ligature is at present. When the time has come for its removal, a slender silver tube is passed inwards over the wire until it reaches the acupressor arteriæ; the wire is then held firmly by the left hand, and the tube passed steadily inwards: with the right. On reaching the converging arms of the instrument, they be-

come compressed within it; the extremities then relax their grasp of the vessel, and the whole is gently withdrawn. (See illustrations.) Its advantages are numerous.

a. The acupressor arteria placed in readiness to grasp the artery.
b. The acupressor arteria closed upon the artery.

1. It is perfectly secure. It will be noticed that, when in use, the reflected limb acts as a spring, retaining the other in its place.
2. It is easily applicable. Anybody could apply it with security, whereas often a well-tied ligature may give way.
3. In cases of necessity, it may be applied without the aid of an assistant, and would, therefore, be invaluable alike to the military surgeon and the country practitioner.
4. It can be applied in one-third of the time it takes to put on a ligature, and in any part where the ligature can be applied.
5. Its great simplicity and cheapness are a recommendation.
6. It is applicable to the treatment of aneurism. It may be applied at the Hunterian site; and in a few days will cause partial or complete occlusion; after which it may at once be removed.
7. It is perfectly applicable to deeply seated parts; wherever the knife goes, it can follow, even although the wound be small. For this purpose, it should be caused to gape by being partially drawn within the end of the tube; it is then applied by being pressed outwards from the interior of the tube, and the tube withdrawn.

I hope that soon all these statements respecting it may be confirmed, and that it may be found useful to the profession.

Forceps of the same kind and for the same purpose as those described by Mr. Nunneley, have, I know, been suggested by Dr. Hoffman and Mr. Staunton; but such instruments are far too cumbersome to admit of their being a benefit to surgery; while the cost would be so great as to prevent them from ever being universally adopted. The acupressor arteria, on the other hand, is simple in construction, and could be manufactured by the gross at a very small cost. It will, I think, be found exactly to supply the defect which Mr. Nunneley confessedly feels in the use of his forceps, and of which he is now endeavouring to discover the remedy. It is, in fact, the realisation of what he aims at when he says: "I think it probable that manufacturers of the safety-pin, or like handicraft workmen, may be able to supply a forceps sufficient for all purposes, at so small a price as to allow it to be used without any consideration of economy. This I am taking steps to ascertain. At one time, I thought of employing forceps whose blades are brought together by a screw motion or by a sliding tube; the latter idea had also occurred to Mr. Birkett", etc.

In the case of the acupressor arteria, the sliding tube is made use of only for the liberation of the artery, or in cases where the instrument has to be applied to an otherwise inaccessible region. It forms no part of the instrument, but may be used for any number of them; thus the objection of costliness is obviated.

Mr. Nunneley says further: "I think it by no means improbable that, in some cases of aneurism, compression by similar forceps, of the artery, on some point of its course above the sac, for a greater or less length of time, may be successful. The sheath of the vessels should be merely punctured to an extent sufficient to allow of the forceps being glided upon the artery alone, no other part being included or disturbed", etc.

It will be seen, by the extract given above, that these ideas with regard to aneurism had also been anticipated in my thesis.

It is gratifying to see the profession being awakened to this important subject; and if any one feels desirous of prosecuting the subject further, I can only say that the models now in my possession will be readily placed at their service. I am indebted for the drawings to my friend, Mr. Milan Coughtrey.

OBSTETRIC MEMORANDA.

[UNDER this head, we shall, from time to time, as materials come to hand from correspondents, publish records of cases remarkable in themselves, or illustrating points of interest in obstetric practice, therapeutic or manipulative. We shall probably in this way preserve from oblivion the notes of very many useful and instructive occurrences in private practice; for the great obstetric experience is that—for the most part hitherto unwritten—of the great body of general practitioners throughout Great Britain. We will only ask those who may forward cases for record, to relate them with the utmost brevity, and equally to condense any appended remarks.]

AN INTERESTING CASE OF MIDWIFERY.

By FRANK ARGLES, L.R.C.P. Edin., M.R.C.S. Eng.

I was called to Mrs. K. on the 5th December, at 8.30 p.m. I found her in labour; and, on making examination, the membranes ruptured. The os was dilated to about the size of a five-shilling piece, and a portion of the placenta (about one-third) presented, and protruded on the lower side. As there was little hæmorrhage beyond a clot or two, the membranes were ruptured, and there were no pains, I administered ergot, but without producing the desired effect. After waiting about three hours, there being no urgent symptoms, I left, giving my patient thirty drops of liquor opii sedativus; at the same time instructing the nurse to send for me, should urgent symptoms require my attendance. Visiting the case at 9.30 a.m. the following day, I found the head presenting at the brim, and the placenta retracted within the uterus. An opiate was again administered, by way of quieting the system; and I again left, there being no pains. At 4 p.m. I was summoned, and in less than half an hour delivered her of a still-born male child. Now, as the child was dead and there was so little hæmorrhage, could it be possible for the placenta to have been entirely detached when the child was *in utero*? or was it a case of partial separation? or must one regard it as a case of partial placenta prævia? I am inclined to look upon it as a case of partial detached placenta, in consequence of its receding during the progress of the labour, coupled with the comparatively slight hæmorrhage.

The placenta was very small and bifurcated, and gave me the idea that one lobe had been separated some time.

PLACENTA PRÆVIA TREATED BY BARNES'S DILATORS AND VERSION.

By WILLIAM HOLT, M.R.C.S. Eng., Petersfield.

THE following case occurred in the practice of Mr. Cross, the gentleman whom I assist.

Mrs. H., aged 37, the mother of seven children, consulted Mr. Cross during her pregnancy, and complained of having had several attacks of flooding since the seventh month, from the character of which her case was diagnosed as one of placenta prævia. On November 20th, we were called upon; and it was stated that the patient was flooding profusely. I proceeded at once to her house; and, on examination, found the os uteri dilated to about the size of a shilling, the placenta presenting, a portion protruding, and the head to be felt behind. As there was profuse hæmorrhage, I introduced the second-sized Barnes's dilator, and gradually filled it with water; this acted as a most efficient plug, completely controlling the hæmorrhage. I left the dilator in for one hour and a quarter. Dilatation had then taken place to an extent sufficient to allow of a little discharge escaping by the side of the dilator. I now withdrew it; and, on examining, found the placenta still presenting; and, as there was plenty of room now, I passed my hand into the uterus, and, pushing the placenta on one side, got hold of a leg and brought it down. The uterus, however, was not in a condition to yield readily, and there was no discharge; and, as the woman was much exhausted, I considered this sufficient. In less than an hour, I was enabled, by a slight amount of manual assistance, to complete the delivery. The child was dead, having, I believe, ceased to exist when the hæmorrhage took place previously to my being called to the case.

The next morning, the patient was going on very well. She made a slow, but good recovery.