excised uterus showed that its cavity was occupied by a large mass of columnar-celled carcinoma.

It is easy to see as one studies the above cases that the diagnosis of malignant disease of the body of the womb is attended at times with difficulty.

Apart from the consideration of the degree of malignancy in any given case, there is at the same time the important question whether the growth, originally benign in character, has become affected by malignant degeneration.

Anyone who has had experience in cutting sections from scrapings of the endometrium knows what need there is for care lest oblique sections of a villous growth should present the microscopical appearance ordinarily found in cancerous formations. At the best the microscope can only give confirmatory evidence, and is not to be trusted as an absolute means of diagnosis.

It is rather by regarding the clinical picture as a whole than by dwelling on one isolated symptom that a correct opinion can be arrived at. Of all clinical phenomena steady increase in the size of a uterus after the menopause is the one that can be most constantly relied upon.

Again, return of hæmorrhage after a careful curetting in a woman who has passed the change of life is of prime importance; and in most cases, whatever the microscopical appearances may be, should hæmorrhage return after a free scraping of the uterus, and should the body of the womb remain large, the operator will probably do well in extirpating the uterus of a woman past the climacteric, whether the sections under the microscope present a favourable prognosis or not. All surgeons are in agreement that the cases which present a favourable prognosis and have a successful after-history are those in which malignant disease is caught at its outset, and has not yet had time to infect tissues outside the primary seat of infection.

Judging from what has gone before the following conclusions are certainly justified, and represent probably the sum of our knowledge at the present time.

CONCLUSIONS.

1. That in cases of corporeal cancer there is a stage of benign adenoma.
2. Uterine scrapings are not perfectly reliable, owing to the tissue being only superficial, and the deep part of the gland not being obtained. Later scrapings, when the disease is more advanced, are therefore more reliable.
3. Clinical signs are more valuable than microscopical evidence.
4. The degree of malignancy varies much, and the disease may run a very slow course.
5. Rapid increase in the size of the body of the womb is the most valuable sign in determining need for extirpation of the whole organ.

SPOON-SHAPED INDENTATIONS IN THE SKULLS OF THE NEWBORN,

WITH ILLUSTRATIVE CASES, AND A NEW METHOD OF TREATMENT
FOR THE IMMEDIATE RELIEF OF THE DEFORMITY.*

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THE subject of indentations in the skulls of the newborn is not one to which very careful attention has been paid in this country. Odd cases doubtless have from time to time been reported in the various journals and textbooks on midwifery; but, as far as I can discover, no one has considered the subject in detail. In Germany the case is only a little better. In France, however, it is very different. Ever since Ambroise Paré first referred to the deformity successive generations of obstetricians have interested themselves in the matter, and even in recent times hardly a year passes without one or more treatises or papers on the subject appearing.

CAUSATION.

Indentations of the fetal skull may be either spoon or furrow shaped. The two varieties occur with about equal

frequency. They, however, have not the same significance, for, although the conditions producing them are in the main the same, the furrow-shaped variety is much less serious, and seldom gives rise to much immediate trouble. My purpose, therefore, at present is to consider almost exclusively the spoon-shaped indentations.

The injury, which is situated usually on one or other parietal or frontal bones in the neighbourhood of the anterior fontanelle, is by no means uncommon, especially in Glasgow, where rickets is so prevalent amongst the lower classes, and parturition is in consequence so frequently laborious. This leads me to say that the accident, with few exceptions, occurs where there is a deformity of the maternal pelvis, and, as rickets is the most common cause of such, we meet with the injury generally in the offspring of women with flat rachitic pelvises. The extent of the pelvic deformity need not be extreme; most commonly it is just sufficient to cause a moderate degree of obstruction to the passage of the head. That was so in 3 of the 4 cases I have seen, and in the recently reported cases by Hinck, Drittzel, Braune, Boissard, Budin, etc.

In the great majority of the cases reported extraction was completed by traction, either on the child's head with forceps or on the trunk if the presentation was a breech or the child had been "turned." Still in a certain small proportion labour terminated spontaneously. Braune's 2 cases and 1 of Hinck's already quoted were examples of this. Rosenski in 43 cases collected by him found spontaneous birth took place in 2 cases, and Menke in 14 cases found it twice. In all these cases of spontaneous birth there was a moderate degree of pelvic deformity.

Where a deformity of the pelvis exists the indentation is usually caused by the head being pressed against the projecting sacral promontory. Occasionally, however, the anterior pelvic wall, an undue prominence of the ileo-pectineal eminence, and still more rarely an osseous tumour of the bony canal, as in the case of Hoffmann quoted by Lelièvre, or a tumour of the soft parts may be the cause.

On the maternal side, apart from deformities of the pelvis, there are very few conditions that have given rise to depressions of the fetal skull. Veit reported a case in a normal pelvis where he considered the cause to be tetanic contractions of the uterus following the administration of ergot. Others have mentioned as causes lateral deviation of the uterus, contractions of the muscles of the pelvic floor, and ankylosis of the coccyx.

Although abnormalities connected with the fœtus but rarely cause such depressions, they may to some extent favour their occurrence. Defective ossification of the fetal skull, for example, is a condition that certainly predisposes to the accident. Recently I made a few simple experiments on the skulls of "stillborn" infants. I found that I could produce depressions with the very greatest ease, and with little pressure in some cases, but in others I could make no impression on the bones at all, even although I used considerable force. In one living child also, which I remember very well, as it had a malformation of both its arms owing to an arrest in their development, with the slightest pressure of the finger an indentation could be produced so soft was the skull.

Lelièvre, in his thesis, quotes a most interesting instance described by Budin, in which in a case of twins both the children were born with depressions on the skull. The "aftercoming" head of the first child, which presented by the breech, was arrested by the presenting head of the second. Both children were born dead.

A prolapsed upper limb, by narrowing the pelvis, may produce a depression. Braune, for example, attributes one of his cases to this cause.

The exact part played by forceps in the production of the deformity is difficult to decide. That certain furrow-shaped depressions may be caused by them is certain, for I have once or twice produced them on the sides of the head when I have taken an oblique grasp; but that spoon-shaped depressions, which almost always occur in the upper part of the vault, are often caused by the blades of the instrument, is very doubtful. Occasionally, if the grasp on the head is very oblique, and the hold not very fast, one blade may directly cause the indentation. In the majority of cases of forceps delivery, however, it is pressure of the head against the promontory of the sacrum or

* Read at a meeting of the Edinburgh Obstetrical Society.

some part of the pelvic wall, not the blades, that is to blame. In this connection I would mention a case referred to more particularly later, where the deformity was produced in delivering with forceps from a normal pelvis a full-term child. The case was a "persistent occipito-posterior" (third vertex) presentation, and I came to the conclusion at the time that the depression over the right frontal bone resulted from pressure against the descending ramus of the pubes of the left side.

In delivering the head lying in a "persistent occipito-posterior" position, the two frontal bones are pressed against the anterior wall of the pelvis while the occiput is being swept over the perineum. The blades of the forceps cannot be the cause, because they would have slipped off the head before their tips could press on the upper part of the frontal bones; besides, in practice, when the forceps slip, as they so often tend to do in occipito-posterior presentations, they do so over the occipital not the frontal part of the head.

Most writers are now agreed that forceps have directly very little to do with the production of depressions. Of recent writers, Boissard thinks it is only when attempts at rotation are made that the instrument can cause them.

Occasionally, two depressions may be found in the same skull, then the one is usually smaller than the other and placed opposite to it.

One or two writers have mentioned the recurrence of the accident. Thus Ahlfeld mentions a patient who had three children born with depressions of the skull.

PROGNOSIS.

Speaking generally, the prognosis is not unfavourable. If the children are born alive the indentations, in the majority of cases, disappear in a week or two, having given rise to no trouble at the time, and producing no ill-effects later. In a certain number, however, the depressions remain, and are a permanent deformity. In such cases there are usually no disturbances, although occasionally there may be minor nervous storms.

In yet another class of cases, although the child lives for days, weeks, or even months, there are very marked local and general disturbances. Such cases usually terminate fatally. The symptoms vary. In some there are nervous phenomena, such as twitchings, convulsions, or paralysis, when there is no difficulty in attributing them to the depression. In other cases, however, the nervous symptoms are absent, or only appear towards the end, there being nothing present but such general evidences of disturbances as fretfulness, disinclination to take the breast, etc.

About three years ago I had such a case under my care, in connection with the work of the West-End Branch of the Glasgow Maternity Hospital. The child, which was mature, was extracted with forceps through a slightly flat rachitic pelvis. It had a spoon-shaped depression over the right frontal bone, but otherwise seemed well, so I did not consider it necessary to operate. The child did not thrive, however. It did not take nourishment quite satisfactorily. Still I could not satisfy myself that this was due to the depression, which remained unaltered. One day, some weeks after the birth, it had a few convulsive seizures, and died. For a day or two before its death I seriously thought of operating, and I have regretted ever since not having done so. Boissard reports a case very similar as regards the absence of nervous symptoms. Death occurred on the fourth day, however, in his case.

But there is yet another group of cases where the child is born dead, or so deeply asphyxiated that if the indentation is not immediately relieved death will certainly result. I saw a case of this kind some four years ago with a fellow-practitioner. The mother was markedly rachitic, the C.V. was about $3\frac{1}{4}$ in. Great difficulty was experienced in extracting the after-coming head. When the child was born it was found to have a deep spoon-shaped depression of the parietal bone. The heart was beating very feebly. We could not resuscitate the child. I remember wondering afterwards if relief of the depression would not have given the child some chance of recovering. However, let me say that when the injury occurs to the after-coming head it is a much more serious matter than if it happens to the fore-coming, because in dragging the former through injuries to the parts about the medulla are so liable to occur that in

cases of depression it may often be difficult to say how far the serious symptoms are the result of the depression, and how far of the injury to the spinal cord. Besides the death may be due to long-continued pressure on the cord.

To give some idea of the seriousness of the accident I mention the following figures.

Ahlfeld mentions 10 cases with 2 deaths. Schröder found in 65 cases 34 per cent. of the children stillborn, 15 per cent. died from the injury, and 50 per cent. remained alive, and as far as could be learned, with few exceptions, were well. Menke reports 14 cases with 3 deaths. I have seen 4 cases, 2 are still alive and well; 1 died at the time of birth, and another some weeks after delivery.

Into the relationship between injuries to the skull and brain sustained during labour, and certain diseases of the nervous system, it is, of course, impossible to enter. As everyone knows a very distinct connection can, not infrequently, be traced between the two.

TREATMENT.

For the immediate relief of depressions of the foetal skull many devices have been tried; thus, such things as exhaust pumps and cupping glasses have been advocated. Koeberlé, and others who have followed his suggestion or varied it slightly, recommended the application over the depression of a piece of leather previously smeared with some very adhesive substance. To the centre of this a cord was attached by which traction could be exerted. None of these devices have proved at all successful.

In recent years, however, several cases have been recorded in which operations have been undertaken for the removal of the deformity. Jennings, for example, trephined the skull, and elevated the depression successfully in a case in which the left frontal bone was indented. In that case there was no great urgency. The operation was performed because twenty-eight hours after delivery there was no improvement in the condition.

In a certain number of cases the life of the child has been saved by timely operative interference. Boissard has reported a most interesting case. A full-time child was delivered with forceps. The presentation was a persistent occipito-posterior. On the left frontal bone a large spoon-shaped depression existed; there was also exophthalmos of the left eye. The child seemed in a hopeless condition, as only once or twice there was a feeble heart beat. The depression was raised by making an incision through the scalp over the coronal suture, and a smaller one through the suture, passing a sound under the skull between it and the dura mater, and pressing out the depressed bone. The indentation, it is stated, was relieved by a force, *très peu considérable*. Immediately, the child began to breathe and rapidly recovered.

Panzani reports one of Secheyron's cases, in which the child was delivered with forceps, the presentation being a "persistent occipito-posterior." The left parietal bone was depressed in the neighbourhood of the anterior superior angle. At birth the child seemed well. Two days after, however, it developed convulsive movements of the right arm, and it seemed generally feeble. On the day following, as the child seemed no better, an operation was decided on. An incision was made through the scalp, then through the bone, and the depression was raised by passing an ear curette between dura and skull. On the second attempt the depression was relieved *brusquement*. The child, immediately after the operation, took the breast greedily and cried lustily. *On voit nettement que l'amélioration immédiate est évidente.*

The oldest reference to operative interference in depressions in the newborn is, as far as I can find, a case reported by Tapret in 1877. Boissard gives the case in detail. There was a great depression with fracture of the left parietal bone, with left exophthalmos and right facial paralysis. The child cried very feebly. M. Millard bored through the skull with a turrel and raised the depressed bone, with the result that the child immediately cried, the convulsions ceased, the exophthalmos gradually disappeared, and on the following day only a trace of facial paralysis remained.

Up to the present time depressions of the skull in the newborn have been severely left alone, except in a few recent cases such as I have described.

The disadvantages of surgical interference when it must be immediate are that it takes time to prepare the field of operation, and that frequently the obstetrician has not suitable instruments to hand, and so valuable moments are lost. The method employed by Boissard, as described, is very simple, and the operation requires very few instruments. It is certainly the operation I would be inclined to adopt if the following treatment, which has proved successful in 3 cases, failed.

A New Method of Treatment.

The bones of the vault of the fetal skull are very resilient, consequently a very little force applied to the depression from the inside is all that is necessary to relieve the indentation. If proof of this is required, I would refer to the two cases of Boissard and Secheyron already briefly described, where in the former the force required to relieve the depression was *très peu considerable*, and where in the latter the bone is said to have returned to its natural shape *brusquement*.

The force must be applied early, otherwise there may occasionally be a little difficulty in raising the bones, as in a case reported by Prudhomme in his thesis published recently, where a depression of the left parietal bone caused convulsions and death of the child on the third day, and where at the necropsy firm pressure on the depression from the inside was necessary to remove the indentation.

Indeed it was knowing this resiliency of the bones, but not being able to apply a force to the inside that led some of the older writers to recommend cupping glasses, air pumps, etc. I will now relate a case and the treatment adopted.

About three years ago I attended a lady in her first confinement. Everything went on satisfactorily, except that the head took up and maintained an occipito-posterior position. As the second stage was being unduly prolonged, I applied forceps, the head being at the outlet. With a moderate degree of traction I delivered her. The child, a female was of average size and mature. It was slightly asphyxiated, and had, very much to my surprise, a deep spoon-shaped depression of its right frontal bone. With a little cold water and slapping, etc., the child cried, and indeed I could not say that it was much affected by the deformity.

While looking at the indentation it occurred to me that by firm compression of the head antero-posteriorly sufficient pressure might be exerted on the depressed bone to cause it to spring out. I hardly expected the simple manœuvre to be so successful, but on the first attempt the depression came out, producing a sound as when a dent in a felt hat is removed. The infant certainly cried louder soon after.

After this success I tried the effect of compressions on artificially-produced depressions in stillborn infants. Sometimes, as I have said, I have been unable to produce such depressions, but when I have found it possible the indentations have all been relieved by antero-posterior compression, indentations of the parietal bones especially coming out with great ease.

Since the case described I have seen none of indentation of the skull, so I have had no further opportunity of trying the treatment. I am able, however, through the kindness of Dr. Malcolm Black, Physician to the Maternity Hospital, and Dr. Dunning (I asked the former to be good enough to try the treatment if a case occurred in his practice) to report a second successful case.

Mrs. X., a 3-para, had been previously delivered of two dead children, the first after craniotomy and the second after induction and craniotomy. At the third confinement a month or two ago Dr. Dunning, who was in attendance, called Dr. Malcolm Black in consultation, and the latter delivered the child, which presented by the breech. The extraction of the aftercoming head was attended with great difficulty, as the pelvis was very much deformed. The child's heart was beating very feebly. Over the left frontal bone there was a large, deep spoon-shaped depression. Artificial respiration brought about little improvement in the child's condition. Recollecting my request he tried compression, with the result that the indentation came suddenly out with a jerk. The child almost immediately after began to make attempts at respiration, and the heart commenced to beat more strongly; indeed, before long it was quite out of danger.

How far this simple method of treatment may prove successful I cannot say, as the cases described are the only two living children in whom it has been tried. I am hopeful, however, that in most cases it will be successful, because, as Milne Murray has pointed out, compression of the skull in an antero-posterior direction brings about an elongation of the

vertical diameter of the head, and indentations are almost always situated on the parietal or frontal bones.

The cases in which the treatment may fail are, I fancy, those in which the indentations are situated low down on the sides of the head, or where too long a time has elapsed since the occurrence of the deformity. On looking over the literature on the subject I can find no reference to the treatment suggested.

POSTSCRIPT.

Since writing the foregoing paper I have treated another case successfully by compression.

The house-surgeon of the Maternity Hospital asked me to see an infant who had just been born, and had a large spoon-shaped depression of the left frontal bone. The following is a brief summary of the labour as given to me by the house-surgeon.

Mrs. X., aged 35, 10-para, was admitted to the Maternity Hospital, on November 23rd, 1900. The os was found to be fully dilated, but the membranes were unruptured; it was also discovered that she had a slightly flat rachitic pelvis, the conjugata vera measuring 4 inches. The membranes were ruptured artificially, when the head engaged in the transverse diameter with the left parietal bone directed posteriorly. As no progress was made, after waiting for some time, the house-surgeon applied forceps (Milne Murray's pattern). The head was grasped obliquely: it was drawn through the brim cavity and outlet without much difficulty. The child, however, was found to have a spoon-shaped depression of the left frontal bone fairly deep and extensive.

When I saw the child about an hour after, I found the deformity as described. The child seemed quite strong, however, and, as far as could be judged, none the worse for the accident. The house-surgeon informed me that it had only been very slightly asphyxiated at birth. He also explained to me how he had tried antero-posterior pressure, but had failed to remove the deformity. Pressing directly antero-posteriorly I also failed. When I changed the direction, however, and grasped the head obliquely, applying one hand over the frontal bone to the right and the other over the occipital to the left side, with firm compression the indentation gradually and entirely disappeared.

In this case the bone did not spring out, and the pressure exerted was greater than in Case 1. I think the reason for that was that in the former case the bone was more ossified than in the latter.

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IMPACTED AND DISPLACED GRAVID UTERUS WITH FIBROID:

NINE MONTHS' GESTATION: CÆSAREAN SECTION WITH EXCISION OF FIBROID AND ANTERIOR UTERINE WALL: RECOVERY.

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AN impacted, retroverted, or retroflexed gravid uterus, in which gestation is prolonged to term, is certainly an uncommon occurrence. The case which I now wish to put on record, so far as I can ascertain, is the only one in which delivery at term by Cæsarean section has been found necessary.

On January 1st, 1900, I was called to see a lady, aged 34, nine months pregnant, and complaining of periodic pains chiefly felt in the region of the rectum, and accompanied by diarrhoea. Palpation detected no hardening of the abdominal tumour. The vagina was dry, and the head could be felt low in the pelvic cavity, but no os uteri could be reached. The finger could not be passed backward behind the head, the vaginal lining being reflected forward over the head. The finger failed to pass upwards laterally, but in front, behind the symphysis pubis, it passed between the head and the pelvic wall without any os, cervix, or superior limit to the vagina being reached. The pains continued all night regularly and slightly. Next morning at 8 o'clock a slight degree of hardening, apparently confined to the right side, could be felt to accompany the pains, and there was a slight, blood-tinged, mucous discharge from the vagina, which was moist.

The condition seemed one of intrauterine foetation with backward displacement, but pregnancy to term in this condition is of so rare occurrence that in spite of the history, the vaginal condition, and the apparent contractions with the pains, the possibility of extrauterine foetation had to be borne in mind, more especially as the patient reported that the previous medical attendant had examined three times *per vaginam* in the first two months, and had told her that "everything was all right."

Previous History.

There had been two easy, normal labours, the last eleven years before. In 1894 she had been told by one medical attendant that the uterus was displaced backwards and fixed in that position, and that if she became pregnant she would certainly have trouble. She had menstruated normally March 25th to 30th, 1899, and from April 7th, by order of another