understand him." Three or four days afterwards, it is reported that "he could not recollect the name of any thing or person; but, as he regained his general health, he regained his power of language." The first indication of this improvement was his asking for some water in Latin.* He could not then recollect the English name of it. His eyesight, particularly in the right eye, was imperfect, as if the retina were partially paralysed. The whole muscular system was weak, but no evidence existed of positive paralysis of limbs. He eventually quite recovered.

Dr. Copeman, among others which I might cite, also quotes a case from Portal, who, after recovering speech and consciousness, which he had lost by apoplexy with left hemiplegia, was unable to pronounce his words intelligibly. "Out of twenty words which he preserved, there were eighteen not understood, and the other two were misapplied." It was thought he was mad; but Portal observed, "I saw it was less a loss of reason than of the power of expressing himself".

ON THE INDUCTION OF PREMA URE LABOUR.†

By JOSEPH GRIFFITHS SWAYNE, M.D.,

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THE induction of premature labour is an operation of unfrequent occurrence in ordinary practice. A limited experience of it is, therefore, worthy of record; and on this account I propose to give my own, which is comprised in the following twenty cases. I shall endeavour to give the details of each case as briefly as possible.

CASE I.—In 1848, in consultation with Mr. Neild, I induced premature labour in the eighth month. The patient, Mrs. Y., I had previously delivered by craniotomy, on account of deformed pelvis. The membranes were punctured and ergot given. The breech presented. The child was still-born, apparently from pressure on the cord. The labour occupied nearly three days. The mother did well.

CASE II.—In 1849, I saw, with my father, Mrs. T., a patient whom he had twice delivered by craniotomy, owing to considerable pelvic deformity. Labour was induced at the beginning of the eighth month by completely detaching the membranes all round the os uteri by the finger. Labour terminated rather more than two days afterwards. On the third day after delivery, symptoms of peritonitis supervened. These were treated by bleeding, calomel, and opium. She made a good recovery, and the child did well.

CASE III.—In 1857, I brought on labour at the beginning of the eighth month, in a poor woman, whom I delivered thirteen months before by craniotomy, and in whom I made out, by measurement, that the conjugate diameter of the pelvis was not more than two inches. Four sponge-tents were introduced, and the process occupied four days. The feet presented. The child was still-born, but the mother did well.

CASE IV.—In 1862, I was called in by Mr. Crossman to see Mrs. G., a primipara very near her full time, but reduced to an extreme degree of emaciation by constant and urgent vomiting, which no remedy would check. I punctured the membranes with a sound, and injected half an ounce of ethereal tincture of ergot into the rectum. Labour came on quickly, and she gave birth to a living child in about twelve hours. There was some *post partum* hæmorrhage. The vomiting ceased, and she was able to take a fair amount of food and stimulus; but, about four days after delivery, she had a violent attack of diarrhœa, and, although this was checked, she became so prostrate, that she sank two days afterwards, just six days after delivery.

CASE V.—In 1863, in consultation with Mr. Corbould, I brought on premature labour at the third month, in Mrs. H., a patient who had twice been delivered by craniotomy. The os uteri was dilated by sponge-tents and afterwards by Dr. Barnes's elastic bags. Unfortunately, the os uteri was very high, and the process of dilatation occupied more than a week. The shoulder presented, and, before the child could be turned, it was expelled, doubled up on itself, and still-born. Symptoms of ruptured uterus supervened, and the patient died two days after

* Those cases are very interesting in which the memory for words in certain languages only is retained. Thus Abercrombie relates the case of an Englishman who, from a cerebral affection, had almost forgotten his own language, and talked in a mixed language of French, Italian, Spanish, German, and Turkish. Having subsequently been burnt about the head by accident, he recovered his recollection of English, to a great extent, but not entirely; thus, when taken to see a small house, he remarked, "It is very neat, but it is a very little child".

In the *Reports of the Westminster Hospital Medical Society* for November 10th, 1838 (see *London Medical Gazette*, vol. xxiii, p. 312), a case is mentioned by Dr. Bird, of a Prussian who had lived many years in England, and who suddenly lost all memory of the English language, and spoke only German. He died in twenty-four hours.

† Read at the Bath and Bristol Branch Meeting, March 5th, 1874.

delivery. A *post mortem* examination showed that the uterus was ruptured between the os uteri externum and internum. The pelvis was not very much deformed, but of male type, the conjugate being longer than the transverse diameter of the brim.

CASE VI.—In 1863, I brought on premature labour in a patient (Mrs. D.) whom I had delivered in her first labour by craniotomy. As the pelvic deformity was not great, the operation was performed at the end of the eighth month. It was commenced by sponge tents and terminated by Dr. Barnes's dilators. Ergot was also given at last. The process occupied five days. Both mother and child did well.

CASE VII.—In 1865, two years after the last operation, the same patient was again delivered by the same means, exactly a month before full term. Three sponge-tents were used, but no other dilators. The operation lasted rather more than three days. Both mother and child did well.

CASE VIII.—In March 1867, I saw with Mr. Burleigh Mrs. T., a primipara, eight months pregnant. She had suffered some time from the most obstinate vomiting, which had defied all the usual remedies. When I saw her, there was much epigastric tenderness; the fluid ejected resembled coffee-grounds, and there was great prostration. I could distinctly feel a pediculated tumour, of the size of a hen's egg, which was attached to the fundus uteri, and must have made pressure on the stomach. Although there had been no pains, the os uteri was dilated to the size of a shilling, and I could feel an elbow presenting. I dilated the os with one of Dr. Barnes's bags, and then effected turning by Dr. Braxton Hicks's bimanual method. The child, though vigorous when born, died four days afterwards. The mother made a good recovery.

CASE IX.—In May 1867, Dr. Brittan consulted me respecting Mrs. C., a primipara, in her eighth month of pregnancy, who was suffering from general anasarca and considerable albuminuria, threatening puerperal convulsions. I began to dilate the os by a tangle-tent, and finished the process with a large sponge-tent. I also gave one drachm of liquid extract of ergot in three doses. Labour came on speedily, and was completed within thirty-six hours. Both mother and child did well.

CASE X.—Mr. Sleeman consulted me, in July 1867, about Mrs. W., a lady whom he had delivered in her first confinement by craniotomy. The conjugate diameter of the pelvis was apparently about three inches. Dilatation was effected by sponge-tents (three of which were used); and one ounce of liquid extract of ergot was given in small, repeated doses. The membranes were also punctured. Labour came on; but, as the head was arrested at the brim, Mr. Sleeman applied the forceps and soon effected delivery. The whole process was completed in less than forty-eight hours. Both mother and child did well. The latter was apparently an eight months' child.

CASE XI.—In March 1869, I induced premature labour in a patient, Mrs. N., who had been twice delivered by craniotomy, on account of pelvic deformity. The os was dilated by tangle and sponge-tents. After the third tent, the membranes ruptured and some pains came on. These, however, although ergot was given, passed off after some hours. I then left her for a few days, and again introduced some tents, but with no better result. I then desisted for the present from further efforts, until, about sixteen days after the introduction of the first tent, labour came on rapidly and the breech of a child presented. This was speedily expelled, and proved to be a fœtus of about eight months. Both it and the mother did well.

CASE XII.—In 1869, Mrs. P., with deformed pelvis, had been twice delivered by craniotomy. As the deformity was not extreme, I determined to bring on labour at the end of the eighth month. I introduced tents of three different sizes on three successive days; when I removed the last, I punctured the membranes, and gave ergot. This brought on effectual pains, and she was delivered a few hours afterwards. The labour was difficult, and there was much pressure on the head. The child tried once or twice to breathe, but could not be recovered by artificial respiration. The mother did well.

CASE XIII.—In 1870, Mr. Wine consulted me about a patient of his, Mrs. T., who had deformed pelvis, and had been twice delivered by craniotomy. Sponge-tents were introduced on the two following days, and then I punctured the membranes. The process occupied rather more than four days. Mr. Wine found it necessary at last to use the forceps. The child, barely a seven months' fœtus, died soon after birth. The mother made a good recovery.

CASE XIV.—In 1871, Mr. Davies requested me to see Mrs. M., a multipara, who was three and a half months pregnant. She was suffering from most obstinate vomiting, which had resisted all remedies; and was very prostrate, having scarcely kept down any food for some days. As her state was very critical, we determined to induce abortion. I introduced a small tangle-tent and a larger one on the next day. A few hours after the second was removed, labour came on with considerable hæmorrhage, and a fœtus of between three and four months was ex-

pelled, together with a part of the placenta. On the next day, I removed the rest of the placenta with the ovum-forceps. The vomiting soon abated and the patient made a good recovery.

CASE XV.—In 1871, in consultation with Mr. Sleeman, I again induced premature labour in Mrs. W. (Case 10). As the last labour was rather difficult and the forceps was required, we agreed to perform the operation just before the end of the seventh month. Three sponge-tents were used on three following days. After the third was withdrawn, the os was well dilated and the membrane ruptured. There was, however, much constitutional irritation, denoted by severe rigors, pain in the back, abdominal tenderness, and a pulse of 136. For this, thirty grains of chloral hydrate and turpentine stupes were employed with good effect. Labour-pains set in, and she gave birth to a still-born infant. She ultimately did well.

CASE XVI.—In 1872, I again induced premature labour in a case (No. 11) who had been thus successfully delivered on account of considerable deformity. The dilatation of the os was effected in three days, four tents being used. As the head was arrested at the brim, I endeavoured to deliver by turning, but without success, and at last had to perform craniotomy, because unfavourable symptoms had set in. The child was very large for eight months. The mother did well.

CASE XVII.—In 1873, I saw, with Dr. Marshall, Mrs. P., a patient of his, who had miscarried five or six times previously, the placenta having been each time diseased and unusually large. She was now about seven months pregnant, and, from various symptoms, there was reason to believe the child was either dead or very feeble. The uterus was very large, and pressed much on the stomach and liver. The urine contained a good deal of bile, and occasionally albumen. Her health was so much impaired by the continuance of pregnancy, that we determined to induce premature labour. This was accordingly effected by sponge-tents. Three were used, and the labour was completed in less than three days. Ergot also was given. The child was swollen and cedematous, and its abdomen was distended with ascites. There was slight pulsation of the cord, but no respiration. The placenta was retained from hour-glass contraction and adhesion, and had to be removed by introducing the hand. It was enormously large, and weighed 2¾ lbs. It appeared to have undergone fatty degeneration. The patient was very prostrate after delivery. The pulse had risen to 140,

and there was constant nausea. The urine contained much bile and albumen. She continued in the same prostrate condition, and died on the third day after delivery.

CASE XVIII.—In 1873, at the end of the seventh month, I induced premature labour, in consultation with Mr. Corbould, in a case (Mrs. T., No. 13), who had been previously so delivered. Two sponge-tents were used. On the morning of the third day, I punctured the membranes, and, in the evening of the same day, the child was expelled feet first. It cried loudly when born, but died about half an hour after birth. The mother did well.

CASE XIX.—In 1873, I was consulted by a medical man about his wife, a multipara, who, at a previous confinement, nearly lost her life from puerperal convulsions. On this occasion, she was about eight months pregnant. The urine was loaded with albumen, and there was considerable anasarca. Two tents were used on two successive days, and the membranes were then punctured. Delivery soon came on. The child seemed feeble, and died six hours after delivery. The albuminuria soon disappeared, and the mother made a good recovery.

CASE XX.—I again (in 1873) brought on premature labour in Mrs. N., a multipara (Cases 11 and 16), who had twice been so delivered. Two sponge-tents were used on two successive days. On the morning of the third, the membranes ruptured. She at this time experienced severe rigors; was very sick, and the pulse was up to 120. In the evening, the child was born. It was very large for seven months. It was still-born, apparently from pressure on the cord, which was round the neck. The mother recovered well.

The statistics of all these cases are given in the annexed table. From this it appears that, of the twenty cases in which the operation was performed, seventeen were multiparae and three primiparae. In one case (20), the operation was performed three times in the same individual, and in three (7, 15, 18) twice. With regard to the morbid condition which rendered the operation necessary, we find that, in the greater number of cases, viz., fourteen out of twenty, it was deformity of the pelvis. The subjects of this deformity were all of them multiparae. In the remaining six cases, the operation was rendered necessary in three by obstinate vomiting, and in three by albuminuria. Of the first three, two were primiparae. Of the last three, two were multiparae. In one of these, the albuminuria was complicated with jaundice.

TWENTY CASES OF INDUCTION OF PREMATURE LABOUR.

No.	Date.	Description.	Date of Operation.	Cause of Operation.	Means Employed.	Presentation.	Duration of Labour.	Result to Mother.	Result to Child.
1	1848	Multipara	8th month	Deformed pelvis	Ergot; puncture of membranes	Breech	Nearly 3 days.	Recovered	Died
2	1849	Ditto	Ditto	Ditto	Separation of membranes round os uteri	Head	Ditto	Recovered	Recovered
3	1857	Ditto	Ditto	Ditto	Sponge-tents	Feet	4 days	Recovered	Died
4	1862	Primipara	9th month	Obstinate vomiting	Ergot; puncture of membranes	Head	12 hours	Died	Recovered
5	1863	Multipara	8th month	Deformed pelvis	Sponge-tents; Dr. Barnes's elastic bags	Arm	10 days	Died	Died
6	1863	Ditto	Ditto	Ditto	Sponge-tents; Barnes's bags; ergot	Head	5 days	Recovered	Recovered
7	1865	Ditto (No. 6)	Ditto	Ditto	Sponge-tents	Head	3 days	Recovered	Recovered
8	1867	Primipara	Ditto	Urgent vomiting	Barnes's bags; turning	Arm	6 hours	Recovered	D. (after 4 days)
9	1867	Ditto	Ditto	Albuminuria	Tangle, and sponge-tents; ergot	Head	36 hours	Recovered	Recovered
10	1867	Multipara	Ditto	Deformed pelvis	Sponge-tents; ergot; puncture of membranes; forceps	Head	2 days	Recovered	Recovered
11	1869	Ditto	Ditto	Ditto	Tangle- and sponge-tents	Breech	16 days	Recovered	Recovered
12	1869	Ditto	Ditto	Ditto	Sponge-tents; ergot; puncture of membranes	Head	3 days	Recovered	Died
13	1870	Ditto	7th month	Ditto	Sponge-tents; punc. of membranes; forceps	Head	4 days	Recovered	Died
14	1871	Ditto	4th month	Urgent vomiting	Tangle-tents	Head	2 days	Recovered	Died
15	1871	Ditto (No. 10)	7th month	Deformed pelvis	Sponge-tents	Head	4 days	Recovered	Died
16	1872	Ditto (No. 11)	8th month	Ditto	Sponge-tents; craniotomy	Head	3 days	Recovered	Died
17	1873	Ditto	Ditto	Albuminuria; jaundice	Sponge-tents; ergot	Head	2½ days	Died	Died
18	1873	Ditto (No. 13)	Ditto	Deformed pelvis	Sponge-tents; puncture of membranes	Head	3 days	Recovered	Died
19	1873	Ditto	Ditto	Albuminuria	Sponge-tents; puncture of membranes	Head	2½ days	Recovered	D. (after 6 hrs)
20	1873	Do. (Nos. 11 & 16)	Ditto	Deformed pelvis	Sponge-tents	Head	2½ days	Recovered	Died

With respect to the period when the operation was performed, we find that, in by far the greater number, viz., sixteen out of twenty, it was during the eighth month of pregnancy. Of the remaining four, in one it was during the ninth month, in two during the seventh, and in one during the fourth month. In these last three, when it was necessary to operate before the fœtus was viable, great deformity was the cause in the first two, and obstinate vomiting in the last.

The great utility of the operation as an alternative for craniotomy in cases of deformed pelvis has been so universally recognised, that I need say no more on that head: there has, however, not been quite so general a consent as to its utility in cases of obstinate vomiting attending pregnancy and in albuminuria causing anasarca and threatening convulsions. Of course, in cases of obstinate vomiting, the operation is only to be performed as a last resource, when all remedies have failed, and the patient is in imminent danger of starvation; and this remark especially applies when the infant has not yet arrived at the age of viability. I have performed the operation three times for this cause. In two (Nos.

8 and 14), it was attended with the happiest results, the patients being apparently snatched from the jaws of death. In another (No. 4), it was unfortunately too late to save life. In all three, the patients were all but moribund.

I remember once being called to a lady, nearly six months pregnant, suffering from obstinate vomiting, whose condition appeared so desperate, that I told her husband that, if I did not find her better on the next day, I should at once bring on labour. I was again summoned to her on that night, because labour-pains had set in; and she was very shortly delivered of twins. Her condition at once improved; all vomiting ceased, she speedily regained flesh and strength, and from that time made a rapid recovery. Nature thus anticipated me, and pointed out, in the most convincing manner, the proper course to be adopted in such cases.

In the three cases of albuminuria in which I had recourse to premature labour, the affection was of a very obstinate character, and attended with peculiar risk. Thus, in the first (No. 9), there was much general

anasarca and commencing effusion into the chest. These symptoms rapidly disappeared after delivery, and the child also was saved. The second case (No. 17), however, did not end so favourably. This patient had repeatedly miscarried two or three months before the full term. In each instance, the foetus had gradually become feeble, and its movements had ceased before it was expelled, its death apparently having been caused by a most extraordinary and abnormal development of the placenta. When I induced labour, the health of the mother had suffered very much, and her condition had become very critical. She had long suffered from obstinate vomiting, jaundice was commencing, and the urine not only contained albumen, but a considerable quantity of bile. The operation was resorted to quite as much to save her life as that of the child. Unfortunately, it was not performed sufficiently early to save either.

Dr. Barnes, in his *Lectures on Obstetric Operations*, makes some very judicious remarks upon this head. He says: "My experience leads me to conclude that, in cases of urgent disease, there is more frequent occasion to regret having delayed the operation too long than having had recourse to it too soon. When, through obstinate vomiting, for example, nutrition has long been arrested, the starved tissues craving for supplies and falling into disintegration, feed the blood with degraded and noxious materials; the system feeds upon itself and poisons itself, the poisoned blood irritates the nervous centres, and these centres, wrought to a state of extreme morbid irritability, respond to the slightest peripheral, uterine, or emotional excitement. All nervous energy is thus diverted from its natural destination, and exhausted in destructive morbid action. Irritative fever ensues, the pulse rises to 140 or more, no organ in the body is capable of discharging its functions, for the pabulum of life is cut off at its very source. At this point, labour, whether it occur spontaneously, as it often does, or be induced artificially, comes too late. The tissues are altered, the powers are impaired beyond recovery, and death soon follows delivery."

In the third case (No. 19), in which albuminuria was the cause of the operation, the urine, when boiled, was nearly solid with albumen, and there was considerable general anasarca. The patient, during a previous labour, being in the same condition, had nearly lost her life from puerperal convulsions. On this occasion, the operation was attended with the best result as regards the mother; but the child, probably poisoned by the maternal blood, only survived six hours.

I have never had occasion to deliver prematurely in order to save the life of the child, when, without any apparent reason, the death of the foetus has regularly taken place a few weeks before the full term. Such cases, however, have occurred to others, and the propriety of the operation has been recognised ever since the time of Denman.

The next point for consideration is the mode of performing the operation. In my two first cases before the year 1850, labour was induced by the old-fashioned methods, viz., by puncturing the membranes and giving ergot in No. 1, and by detaching the membranes around the os in No. 2. After the time mentioned, having read Sir J. Simpson's memoirs on the subject, I always commenced the operation by dilating the os uteri mechanically before puncturing the membrane—a method which is much superior, because it more exactly imitates the natural process of labour. To puncture the membranes before there is any dilatation of the os is to put the cart before the horse, and to invert the process of labour; and, therefore, it is no wonder that such a proceeding, especially when combined with the use of ergot, is more apt to endanger the life of the child from compression of the cord.

Accordingly, in all my other cases (with the exception of No. 4), labour was invariably commenced by dilating the os uteri. In No. 4, the condition of the mother was so critical, that very prompt delivery was necessary, without reference to the child, and there was already some dilatation of the os uteri.

The instruments ordinarily employed for the purpose of dilating the os uteri are tents of sea-tangle or compressed sponge, and the elastic India-rubber bags recommended by Dr. Barnes. My own experience leads me to prefer the sponge-tents, and I now almost invariably employ them, and insert them in the following manner. The patient being in the ordinary obstetric position, the fore and middle fingers of the left hand, well oiled, are to be passed up to the os uteri externum, which is generally sufficiently open to admit the point of one, and sometimes even of both, fingers. A small-sized sponge-tent, about the size, for instance, of an ordinary radish, is to be mounted on a proper stilette, made for the purpose, and passed along the groove between the fore and middle fingers of the left hand, until its point is inserted into the os uteri. The tent is then to be pushed on until a very little of it, not more, perhaps, than a quarter of an inch, projects into the vagina beyond the os uteri. If the os be so high that it cannot well be reached by the finger, the tent may be inserted through a full-sized tube speculum. If also it be very little open, a tangle-tent may be found more

convenient to begin with. Care should be taken to push the tent up sufficiently far, as it should be remembered that, two months or so before delivery, there is often a considerable interval between the os uteri externum and internum; otherwise the tent may not pass through the os internum. After the tent is introduced, a piece of soft silk handkerchief may be passed up as a plug to keep it *in situ*. On the day following, this tent should be removed and a large one inserted, and on the next day a tent of the largest size. Generally two, or at most three, tents are required to complete the full dilatation. At this time, probably labour-pains will set in regularly, and the membranes will rupture. Should this not be the case, the membranes may be punctured, and the most convenient instrument for this purpose I have found to be a gum elastic male catheter, of which the end has been cut off, so that the stilette can be protruded at pleasure. Should the pains still be weak or ineffectual, ergot may be given.

Before it was the custom to impregnate sponge-tents with carbolic acid, they used to become very offensive if left in the vagina more than ten or twelve hours, and there was some risk of septicæmia in consequence. I, therefore, never was accustomed to leave a tent *in situ* more than twelve hours. In this time, however, the tent will not dilate to its full extent. I now always leave each tent twenty-four hours *in situ*, and I do not find that there is any risk of septicæmia when carbolised tents are used.

On the whole, I prefer carbolised sponge-tents very much to the elastic bags, because they effect the process of dilatation more steadily, continuously, and gradually, and therefore imitate more exactly the natural process of dilatation, which frequently occupies several days from its first commencement. As a general rule, it is not desirable to dilate the os too rapidly, especially when the time for that operation falls considerably short of the full term, for then there is a proportionally greater thickness of the os uteri to overcome.

Unless there be some special circumstances present which render prompt delivery necessary, it is never advisable to induce premature labour with that rapidity which Dr. Barnes enumerates as one of the advantages of the elastic bags, when he remarks, "that it is just as feasible to make an appointment at any distance from home to carry out at one sitting the induction of labour as it is to cut for the stone". This is, no doubt, one great advantage which we can derive from the use of the elastic bags; but still it is one of which we should do well not to avail ourselves, except under very exceptional circumstances. The chief objection, I think, to the elastic bags, is the difficulty of introducing them. Unless the os uteri is tolerably low, and open enough just to admit the tips of two fingers, it will be much safer to commence the dilatation with a tent of tangle or sponge.

The opposite extreme, of occupying too much time in the process of dilatation, is also to be avoided. If the process occupy more than three or four days, the continual pressure of a foreign body in the os uteri may cause considerable irritation, or even inflammation of the part, which may produce ulceration and softening, and thus give rise to very untoward results, especially if the os be subjected to any undue strain afterwards during the labour. In one of my cases (No. 5), I believe that this cause led to a rupture of the neck of the uterus, and consequently to a fatal result. In this case the child lay transversely; the os was very high, very little open, and very difficult to reach; and I think it very probable that most of the dilators were not passed far enough through the os uteri internum to act very effectually. In this way ten days were consumed in the dilatation, and when the labour came on the child was expelled very rapidly in a doubled condition, and thus a rupture of the neck of the uterus was occasioned, which, although it did not pass through the peritoneum, was sufficient to cause death. There was, no doubt, an unfortunate combination of circumstances in this case; yet it will always be well, I think, if the os be not well dilated in three or four days, to desist from further efforts by these means, and to adopt some other method of inducing labour; or even to give up all attempts for the present, and recommence at the end of a week or ten days. I have sometimes known the labour come on quite unexpectedly, and apparently spontaneously, many days after all efforts to induce it had been abandoned. This happened in one of my own (No. 11) cases.

There is another very effectual way of bringing on premature labour, of which I have had no experience—I mean the intrauterine douche. I have never tried it, because I have been, on the whole, well satisfied with the sponge-tents, and I have been deterred also by the alarming and even fatal results which have occasionally followed its use even in the most skillful hands.

The time occupied by a premature labour artificially induced is very variable. In my own cases, the shortest time was six hours (No. 8), and the longest sixteen days (No. 11). In the first, the woman was in such a critical condition, owing to constant vomiting, that it was necessary to

deliver as quickly as possible; and here I experienced the very great utility of Dr. Barnes's elastic bags in causing rapid dilatation. In the second, after trying in vain for several days to induce labour by tangle- and sponge-tents, I desisted from further efforts. About ten days afterwards, labour came almost as if spontaneously, and terminated very favourably for both mother and child. On the whole, the average time occupied was about three days.

I now come to by far the most important part of these statistics—viz., the result of the operation to both mother and child. And here I must confess that my own statistics do not show in so favourable a light as those which have been recorded by many others. This result, however, is more apparent than real. Out of my total of 20 cases, three mothers died after the operation. In two of these the condition was so desperate, that to have declined performing the operation would have been to have abandoned them to certain death. As it turned out, however, the shock of the operation was the last straw which broke the camel's back. Notwithstanding this, I should again, in a similar case, be disposed to run the same risk rather than to resign the patient to her fate without making an effort in her behalf. The only case in which death was clearly the result of the operation was No. 5. This arose from an untoward combination of circumstances, which I have already explained.

In my own cases, the infant mortality also is rather great; as many as 11 infants out of 20 were still-born, and of those who were born alive two died, one six hours and the other four days afterwards. Although these results are not so unfavourable as some that are recorded, as, for instance, in the 46 cases mentioned by Dr. Merriman, jun., of which only 16 children lived, yet they are not so good as the averages of a great number of different practitioners, which give on the whole a mortality of rather less than half the children. Part of the infant mortality in induced premature labour is due, no doubt, to the fact, that malpresentations are more frequent than at the full term. Thus in 243 premature cases related by Dr. Arneth, there was one malpresentation in five. In my twenty cases, there were four malpresentations (two of the breech, one of the feet, and one of the arm); and this exactly corresponds with Dr. Arneth's average.

On the whole, as regards the maternal mortality, the induction of premature labour has not, in my hands, shown a more favourable result than the operation for which it is an alternative—viz., craniotomy, which in my own practice has proved fatal in two cases only out of thirty-four. In three of my twenty cases, the induction of labour gave rise to very severe and alarming symptoms resulting from shock, such as excessive rigors, pain in the back, with abdominal tenderness, and a pulse of 130; so that I cannot altogether endorse the statement of Dr. Churchill, when he says that "there is unquestionably some risk incurred by the mother, but not more than by an accidental premature labour".

Although the saving of infant life effected by this operation is an advantage which far outweighs any of the disadvantages just mentioned, yet the accoucheur should, I think, always bear in mind that it is a proceeding attended with some risk, and involving a great amount of responsibility—such an amount, indeed, that he ought always, if possible, to share it with another practitioner.

ON HERB-POISONING AT THE CAPE OF GOOD HOPE.*

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THE Bushmen tribes (Bosjesmen) of Southern Africa are pretty generally known to be naturally cunning, treacherous, and vindictive. As regards *physique*, authorities in ethnological science have placed them in all but the lowest grade in the human scale, and their mental capacity is, no doubt, only on a par with their physical configuration. Nevertheless, these people manifest certain inherent powers of perception, and they may safely be credited with a tolerably accurate knowledge as to right and wrong. We must, therefore, not view them, as some have been disposed to do, in the light of beings wholly devoid of a moral sense—ill-regulated and distorted though it undoubtedly is.

Consequently the Bushman of Southern Africa must, like his superiors in the human family, be held responsible for his deeds, whether good or bad; though, after taking into consideration his very depraved habits and miserable mode of living, his criminal propensities, and his disregard of all means calculated to raise him from his degraded condition, we feel compelled to relegate him, in a social sense, to the class commonly denominated "evil-doers".

But, in the Kaffir race, of which people we have a considerable number scattered throughout the district of Cradock, comprising prin-

cipally individuals belonging to the Amaxosa, Tambookie, and Basuto tribes, we find no trace of resemblance to the genuine aborigines of Southern Africa. The Kaffir, whose original habitat is believed to be North-East Africa, is almost as distinct and different in his physical and mental development from the Bushman as he is from the European; and, if placed in comparison with the Koranna and Damara Hottentots, the Griquas, Bosjesmen, and other unpromising people peculiar to this region, we have to pronounce him in every respect a superior variety of the genus *Homo*.

But, notwithstanding, the Kaffir is an utter savage, and it is with much difficulty he can be brought to a proper appreciation of European laws and customs; a considerable time must elapse before the march of civilisation here, progressive as it is, can render him a trustworthy dependent to the colonists; and, therefore, we have good ground for assuming that, until such can take place, our barbarous coloured races are not likely to refrain from resorting, as occasion may suit them, to the crime of secret poisoning. We must not, however, forget that it is a stated axiom in the ethics and laws of savage races, that though criminal acts, or such as relate to death by poisoning, and, indeed, all serious offences, when perpetrated against any members of their own tribe or nation, are followed by condign punishment on the offenders, such crimes are really considered as meritorious deeds when members of foreign, and, therefore, to them ill-favoured, communities are the victims.

As bearing upon the foregoing remarks, I would now observe that, during the last eight years, I have been required to investigate, in my official capacity as district surgeon of this division, eleven cases of reported poisoning in and around Cradock. In many of these, whole families have been affected, and generally in each family one, and sometimes more, deaths have occurred. The above may be looked upon as a considerable number for a comparatively small and scattered population, which includes, in town and country, according to the last census, only 12,228 inhabitants, the whole district embracing an area of 1,806,692 acres (2,986 square miles). We must also take into account that, perhaps, not more than one-half of the above crimes (at least among the coloured people), when committed in isolated places, are ever brought to light.

It is not my intention to enter at present into any detailed statement on the cases above referred to, except on one which recently occurred at Middleburg, and which involved very serious and important issues. I would only remark, with respect to the others, that in many of them I found that strychnia, or else the seeds of *strychnos nux vomica*, had been the drug resorted to; and in other cases the tuberous roots of certain iridaceous plants had, as far as could be ascertained, been used. At the scattered farm-houses hereabouts, a small supply of strychnia is usually kept for the destruction of leopards, wolves, jackals, wild dogs, and other troublesome carnivora; this poison is, therefore, through carelessness, often of easy access to persons who may be criminally disposed.

In fatal cases of poisoning by strychnia, that alkaloid is not now considered a very difficult substance to detect; but, in this colony, which possesses a large and widely extended flora, an arrival at a correct determination by analysis as to the nature and properties of any indigenous plants used in attempts to poison cannot fail, in the absence of other good proof, to be a very complicated and troublesome procedure. Therefore, when a case of such a character rests otherwise upon very doubtful evidence, who can be surprised that a satisfactory conclusion is not frequently attained?

On March 25th last year, an express reached Cradock from Mr. C. W. Andrews, resident magistrate of Middleburg—a town sixty miles north of this—with a request that I would attend there at once, for the purpose of rendering professional aid to the survivors in a case of poisoning which had just occurred. The whole household of Dr. Coward, district surgeon for Middleburg (except a Bushman maid-servant), had been seized on the previous day, after partaking of some soup, with alarming vomiting, followed by a painful feeling of constriction across the chest, and other abnormal symptoms. Mr. J. O. Reeve, a merchant of Graaff Reinet, at the time on a visit to Dr. Coward, had died within eighteen hours of receipt of the poison, and, on the same day (24th), little hope was entertained of the recovery of the others. On my arrival at Middleburg, I found the whole family overwhelmed with grief; for, on the morning of the 25th, a fine little boy of Dr. Coward's, eight years of age, had also succumbed to the effects of the poison. In all, eight persons had been affected by it. Fortunately, by that time, serious symptoms in the survivors had considerably abated, and, although all were suffering from severe shock and after-effects, restoration was being gradually established. I made a *post mortem* examination on the body of Mr. Reeve, who had been a well-formed and muscular man of about 30 years. The body presented, externally, a natural appearance. There was no *rigor mortis*—a characteristic feature in cases of death from *strychnos*, *brehmia*, *hyananche*, *melianthus* (the

* For this interesting MS. we are indebted to the Editor of *Nature*.