PART OF A CLINICAL LECTURE ON APHASIA.

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IN the number of the BRITISH MEDICAL JOURNAL for July 4th (see page 19) is an interesting quotation by Mr. Sidney Coupland from the pages of Goethe's *Wilhelm Meister* (originally published in 1795), in which the author describes that condition which we now term aphasia as associated with hemiplegia of the right side of the body. The subject of it was the father of Theresa, who (according to the narrative, which is not pursued by Mr. Coupland) had something "on his mind", which he was unable, though very anxious, to confide to his daughter, and which was evidently of the utmost importance to her (probably the account of some treasure destined for her, to the exclusion of her hateful mother). The father's eyes, we are told, no longer spoke his wishes as in times gone by, owing, of course, to paralysis of the muscles of expression; and he quickly became insensible, and died. As Mr. Coupland remarks, the description by Goethe* of the aphasic patient is very graphic, and evidently an accurate one; and thanks are due to him from all students of nervous affections for drawing attention to the passage in question; as all will admit that there is a peculiar pleasure in observing how facts of old date, which have a long time ago been noted without reference to any theory, are capable of furnishing illustrations of laws which have been but recently determined; and the interest in such cases is further enhanced when the original observer happens to have been one not educated to clinical observation. In the case of Goethe, it is true, as Mr. Coupland says, that he was educated for the legal profession; and thus the precision and truth of the quotation are the more admirable. But we must not forget that Goethe was an acute observer of physical phenomena; and he is well known to have had opportunities of studying physics, mechanics, chemistry, and even medicine, in addition to poetry and literature.† He owed his friendship with Schiller to his botanical studies.

Did opportunity permit, it would be an interesting task to quote highly important cases which exist of aphasia, as noted in connexion with both right and left hemiplegia, by physicians long prior to 1836, when the true import of the affection began to be more clearly recognised, and was thought to be better understood. I desire, however, at the present time, to do little more than adduce one or two cases additional to that of Mr. Coupland in which non-medical observers have delineated true aphasia in an unmistakable manner.

The case described by Goethe, as before stated, was published in 1795; but in 1782 our great lexicographer and moralist, Dr. Samuel Johnson, one whom our profession must especially regard, seeing that he was much addicted to chemistry, and was the loving eulogist of physicians,‡ described an attack which, at the age of seventy-four, he had

* It is worthy of notice, that the year previous to that in which Goethe wrote his own case—viz., in 1794—Dr. Falconer, in his *Observations on Palsy*, in the *Memoirs of the Medical Society of London* (see vol. ii, p. 211), wrote as follows: "It is proper to remark, that paralytic persons frequently retain their own ideas tolerably clear, when they are unable to recollect the words which are proper to express them; hence they are apt to mistake the names of objects, and to substitute wrong words while their own ideas are perfectly consistent."

† When studying as a youth at Leipzig, he was much with the physician and botanist Ludwig, whose boards were almost all students of medicine, and where the names of Haller, Linnaeus, and Buffon were always pronounced with deep veneration, and where "he became acquainted with the vocabulary of sciences which engaged their attention". Later on, he studied Boerhaave's works; and still later on, at Strasburg, he lived much with medical students, and attended Spielmann's course of chemistry and Lobstein's of anatomy. Speaking of students of medicine, he at the time observed, "they are the only students who are eagerly occupied with their science, even after the hours of study. This zeal arises from the very nature of their labours, which, at once simple and complicated, are objects of sense, and, nevertheless, are of the most elevated nature", etc. It will be remembered that Virchow wrote on Goethe as a naturalist; and that Lewes, in his *Life and Works of Goethe*, has a chapter on the poet as a man of science*, who well deserved this name, when we consider the nature of his *Treatise on the Metamorphoses of Plants*, and remember the facts that he first showed that all parts of a plant were modifications of the flower; that he discovered the intermaxillary bone in 1784, and wrote on comparative anatomy, and showed that all parts of a skeleton are modifications of a vertebra. Helmholz and Owen accord to Goethe high testimony for his prescience in science, and for his philosophical principles and fundamental conceptions, on which so much was subsequently founded; and his name is associated with that of Meckel and Geoffroy Saint-Hilaire in connection with the study of development and the general laws of organisation.

‡ If any reader do not know the following few lines, he will find them in *Johnson's Life of Dr. Garth*, and I hope not be sorry to see them quoted: "I believe every man has found in physicians great liberality and dignity of sentiment, very prompt effusions of beneficence, and willingness to exert a lucrative art where there is no hope of lucre."

himself experienced, accompanied by "agraphia", the circumstances of which cannot fail to be interesting. My gleanings of Johnson's medical history are, of course, from Boswell's *Life*. It seems that the illustrious Doctor, who ever since the age of twenty had been ailing, and was considered by his friend Sir Lucas Pepys* an intractable patient,† had for some weeks been the subject of asthma, for which at different times he had lost fifty ounces of blood by phlebotomy (though, owing to the supervention of dropsy, this had been of late forborne by Pepys' advice), and had taken much opium. In March of 1782, his old friend and physician, Dr. Lawrence, who was President of the College for seven years, to whom the Doctor was in the habit of writing descriptions of his own ailments in Latin (and the death of whose wife gave occasion, as Dr. Munk says, to one of the finest letters which Johnson ever wrote), had become very deaf, and subsequently had been affected by paralysis in which speech was affected; and it is clear that he had hemiplegia of the right side, inasmuch as Dr. Johnson, writing of him afterwards, observed, "If we could have again but his mind, and his tongue in his mind, and his *right* hand,‡ we should not have to lament the rest." On the 17th of June following Dr. Lawrence's attack of right hemiplegia with loss of speech (? aphasia), Dr. Johnson himself, at 3 A.M., after sitting for his picture on the previous day, subsequent to which he was more than usually comfortable and cheerful, woke out of sleep and sat up (as had long been his custom), when he felt a confusion and indistinctness in his head, which lasted, as it appeared to him, half a minute, and was accompanied by *loss of speech*. The details which he has recorded of his attack are so circumstantial and precise, and evidently so accurate, that I shall offer no apologies for quoting them pretty fully. In the course of the day of the attack, he was *able to write* to his friend the Rev. Dr. J. Taylor, saying that he had had a paralytic stroke, and requesting him to bring Dr. Heberden, as he thought that a speedy application of stimulants might do much, and asking "if a vomit, vigorous and rough, would not rouse the organs of speech to action"; and he sent to his neighbour, Dr. Brocklesby.

As he had been taking opium freely, in doses of even *three grains*, he naturally inquired whether that might not have had something to do with his "dreadful distress", as he termed his illness. Writing to Mrs. Thrale two days after his attack, he observed that, when he woke up as above described, he was alarmed, and prayed God that, however he might affect his body, he would spare his understanding. This prayer, that he "might try the integrity of his faculties", was made in Latin verse. "The lines," he wrote, "were not very good. I made them easily, and concluded myself to be unimpaired in my faculties." "Soon after, I perceived that I had suffered a paralytic stroke, and that my speech was taken away from me. I had no pain, and so little dejection, in this dreadful state, that I wondered at my own apathy, and considered that perhaps *death itself*, when it should come, would excite less horror than seems now to attend it.§ In order to rouse the vocal organs, I took two drams. *Wine has been celebrated for the production of eloquence.*|| I put myself into violent motion, and I think repeated it; but all was vain. I then went to bed; and, strange as it may seem, I think slept. When I saw light, it was time to contrive what I should do. Though God stopped my speech, *he left my hand*. I enjoyed a mercy which was not granted to my dear friend Lawrence, who now perhaps overlooks me as I am writing, and rejoices that I have what he wanted. . . . I then wrote a card to Mr. Allen, that I might have a discreet friend at hand, to act as occasion should require. In *penning this note, I had some difficulty: my hand, I know not how or why, MADE WRONG LETTERS.*" In a subsequent letter, he could say "no", but could scarcely say "yes". On the following day (the 18th),

* Who attended George III in his severe illness in 1788-89.

† Johnson was so irritable naturally, that not only did he pare his nails to the quick, but scraped the joints of his fingers with a penknife till they seemed quite red and raw. His impetuosity was often shown in his illnesses, as when he would be led even against the good sense of his physicians; and he even scarified his own legs with a lancet and scissors secreted in his bed, from which he lost much blood. On one occasion, when he was being scarified for anasarca by Mr. Cruikshank, he exclaimed, "Deeper, deeper; I will abide the consequence. You are afraid of your reputation, but that is nothing to me."

‡ It seems that Dr. Lawrence's paralysed hand became greatly oedematous—a condition which is, of course, well known frequently to exist in paralysed limbs, for which Johnson suggested the use of electricity, no doubt in accordance with the rules of treatment of the time. (Parry, etc.)

§ Dr. Johnson had a great terror of death, as is shown by many passages in his writings.

|| *In vino veritas* is, no doubt, a true adage, and it need not be said that many a forensic speech has owed its force and power of compelling acquiescence to the stimulus of alcohol. Mental excitement, also, which may take away all power of speech, may, on the other hand, not only intensify powers of expression, but even restore lost speech. Thus examples exist of fright bringing back this faculty; and I may quote a case *ad rem* from Southey's *Commonplace Book*, in which speech which had been lost for four years was restored owing to a fright. I may also quote the fact of defective speech in idiots becoming more fluent during acute disease. (From English edition of Griesinger, see p. 369.)

he wrote that he was "not at all helpless", and wanted no particular assistance; and prayed that speech might be restored to him.

On July 3rd, he wrote that he could "now speak; but the nerves are weak, and I cannot continue discourse long". He had then recently been to the club where Lord Palmerston was proposed as a member and rejected; and he had leave, as he said, from his physicians, to wash the cantharides from his head.

In spite of much depression, partly arising from the death of the Rev. Dr. Wheeler, his "learned friend, the man with whom he most delighted to converse", and of his friend and companion, the cultivated but blind Mrs. Williams, he very quickly rallied from the seizure and its effects. Subsequently, he had gout, which also he had had previously, the first time being ten years before—an affection which was represented to him by Dr. Mudge as being "an antagonist of the palsy", and was therefore *tolerance* to him; and was troubled with sarcocele, for which he was attended by Mr. Pott and Mr. Cruikshank; and afterwards by violent spasmodic asthma and dropsy. Throughout all this, he nevertheless, as his faithful biographer Boswell observed, "gave many evidences of the continuance of those wondrous powers of mind which raised him so high in the intellectual world". During the year following, Dr. Johnson died "by a quiet and silent expiration",* but had no return of the cerebral seizure.†

The above case of Dr. Johnson appears to me to be one of importance. How far the opium was concerned in leading to the morbid condition of the brain which existed, and what that exact condition was, are questions of interest. That he had had a seizure during sleep, which left him with his mind entire, but with impaired powers of speech and *inability to write those letters and words* which he desired, is obvious. It does not seem that he had had any biting of the tongue, or any hemiplegia as regards the limbs; and his mental powers were evidently untouched. But he certainly had what is termed "agraphia", and probably aphasia, judging from the description of the imperfect speech which he gives. I may here observe that the question of the influence of the opium in Johnson's case brings to my mind the cases of temporary aphasia by the use of opium and other remedies, apart from any tangible structural lesion and consequent paralytic symptom, which I alluded to in some observations in the *Lancet* for August 22nd, 1868, p. 252.‡

I will now refer to another interesting and still more decisive instance of aphasia (though not associated with paralysis), recorded some years before this affection was duly realised, by one who was not a clinical observer. The case was that of Spalding, an eminent German scholar, recorded by himself, and quoted from the *Psychological Magazine* by Dr. Millengen in his work on the *Passions*. It appears that his mind had for some time been overtaxed, when, on the occasion of his writing a receipt for some money, "as soon as he had written the first few words, he found himself incapable of proceeding further. He strove all he could, and strained his attention to the uttermost, but to no purpose. He knew the characters he continued to make were not those he wished to write, but could not discover where the fault lay. He then desisted, and, partly by broken words and syllables, and partly by gestures, made the person who waited for the receipt understand that he should leave him. For about half an hour, a tumultuary disorder reigned in his senses, so that he was incapable of remarking anything very particular, except that one series of ideas of a trifling nature, and confusedly intermixed, forced themselves involuntarily on the mind. At the same time, his external senses continued perfect, and he saw and knew everything around him. His speech, however, failed in the same manner as his power of writing, and he perceived that *he spoke other words than those he intended*. In less than an hour, he recovered himself from his confusion, and felt nothing but a slight headache. On examining the receipt on which the aberration first

betrayed itself, he found that, instead of the words 'fifty dollars', he had written 'fifty dollars through the salvation of Bra—'; the last word being left unfinished, and without his having the least recollection of what it was intended to be."

I will add to the above instances of aphasia in men of note, the details of which have been recorded without reference to any theory, etc., that of Dean Swift. He was well known to have been very deaf, as he said he "could hear with neither ear, except it be a woman with a treble, and a man with a counter-tenor". He had a cerebral affection, and, in connection with it, loss of power of the limbs; but this was on the *left* side of the body, for he records, "My left hand is very weak, and trembles; but my right side has not been touched." His biographer relates that "sometimes he would try, evidently with pain, to *find words*; but, not being able, he would fetch a sigh and remain silent." Later on, he had giddiness, with outbursts of passion, as he observes, "vertiginosus, inops, surdus, male gratus amicis". He was himself aware of his own tendencies as regards health, and was wont, pointing to a decaying tree, to say he was like it; he should die "first at the top"—a saying quoted by Byron, referring to himself. He would often attempt to speak his mind, but could not recollect words by which to express his meaning. He, however, never "talked nonsense or said a foolish thing". For some time before death, he remained perfectly silent. When his body was examined after death, the skull showed signs of chronic disease, and much water was found in the brain.* In the bust or cast taken after death, as well as one taken during life, were indications of paralysis of the right side of the face.†

I before observed that it was not my intention to adduce instances at present of unnoticed aphasia, or rather of aphasia whose import was not considered, from professional sources, many of which have been described with great fidelity to nature, though without any clear appreciation of the value of the aphasia; but I cannot refrain, in passing, from referring to two examples of the kind which are before me at the present time, and with them I will close this communication.

The first is a case related by Casper in vol. iv of his *Handbook of Forensic Medicine* (New Sydenham Society's translation, p. 31). The case was that of a girl aged 12, who had been struck on the breast and back, and also "seized by the throat"; and it was immediately found that she had *lost her speech*. Fourteen days after the accident, the marks of the bruises which had existed had all vanished, and the child was quite well; but her voice was found to consist of "inarticulate sounds, perfectly unintelligible; and, when asked, it was only with difficulty that what she wished to say could be puzzled out". The child's state remained unchanged fifteen days later; "she could not name one single consonant, and nothing but vowel-sounds were heard". When made to read aloud, nothing was heard "but a perfectly unintelligible clatter of vowels". Four weeks subsequently, the child had perfectly recovered, and could speak "with fluency and distinctness". The improvement took place gradually.

The second is a case related by Dr. Copeman in his *Collections of Cases of Apoplexy*, 1845 (see p. 189). It was that of a gentleman about seventy years of age, who, whilst dressing, was attacked by vertigo and confusion of thought. He had some pain in the right temple, and was bled and purged. He was slightly relieved, but shortly afterwards lost "the power of expressing himself". His memory failed, and he was scarcely able to stand alone. After being cupped, he had a convulsive start, and became faint. On the next day, he was unable to express himself intelligibly; and on the day after that, whilst he appeared clearly to know what he wanted, he made frequent attempts to speak; but it was impossible to understand a word he said. "It seemed to me," says Dr. Copeman, "that he might be talking Hindostanee or some Indian language that he had been accustomed to in former days; but his lady, who had also lived in India, could not at all

* After death, Dr. Johnson's body was examined, but the head was not opened.

† In passing, I would note an interesting fact—viz., that on one occasion he obtained "sudden and unexpected relief" by voiding twenty pints of urine in the day, and that he took the vinegar of squills, as he found the powdered squills "hurt his stomach" so much that he could not take them. The ammoniacum did him no good. During his last illness, he had the benefit of *consilia medica*, in answer to written inquiries, from Dr. Gillespie, Sir Alexander Dick, Drs. Allen, Hope, and Monro of Edinburgh, whilst under the care of Drs. Heberden and Brocklesby.

‡ I there recorded a case showing aphasia as resulting from the use of opium. In the number of the same paper for November 28th of the same year (see p. 714), and also in vol. iii of the *St. George's Hospital Reports*, p. 163, Dr. Blake has recorded the same condition as resulting from the use of stramonium; and Dr. Nicholls of Chelmsford has seen aphasia arising from the use of stramonium.

Dr. Wm. Ogle has described in the same volume of *Hospital Reports*, page 167, cases of loss of speech from the bites of venomous snakes, though in many cases it would seem that this arose from want of muscular power in the muscles engaged in articulation.

It is placed on record that the soldiers of Anthony, in their return from the Parthian war, were attacked by loss of memory after eating some poisonous plants in their march.

* An interesting case of aphasia in connection with hydrocephalus is recorded by Dr. Baillie in the second volume of his works (p. 17). The patient was a man aged 56, who had hemiplegia on the right side; and Dr. Baillie says "by this attack he lost the recollection of the words of his own language, except a very few, which he pronounced with the greatest distinctness, and without exhibiting that thickness in pronunciation which is so common in paralytic patients. The words 'Yes, yes', 'No, no, Mr. Reed, yesterday', were employed on all occasions, and with a great variety of tone, to express pleasure and displeasure, joy and sorrow; to explain the circumstances of his disorder, and to give directions about what he wanted. He did not seem to be aware that these words were not the proper ones to express his meaning, for he often betrayed impatience when he was not understood", etc. "He could pronounce other words distinctly, but he hardly ever did so, except to repeat some words first uttered in his presence." His understanding was complete. Later on, the paralysed limbs became greatly contracted, and later on, some contraction of the opposite leg. The only morbid appearances about the brain found after death were distension of the lateral ventricles by six ounces of fluid, and enlargement of the left vertebral artery, whose walls were thickened.

† See "Some Particulars respecting Swift and Stella", by W. R. Wilde, in the *Dublin Quarterly Journal of Medical Science*, vol. iii, 1847, p. 384, and vol. iv, p. 1. Swift expressed a whimsical desire that when he died he should be buried in any *dry* place of the cathedral.

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.†

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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-