pressure, and, in spite of the hæmorrhage, the temperature would most probably have been above normal. After watching the case for a week, during which time the tumour had distinctly increased in size, I concluded it was a tubal pregnancy, and I asked my colleague, Mr. Thornton, to give me his opinion. He agreed with me so entirely that the only question was whether it should be treated by electrolysis or by abdominal section. It appeared a typical case for the former, and we decided that I should adopt it.

Several of my colleagues saw the case, and were interested in it; and on August 2nd I operated. Dr. W. S. Griffith administered the anæsthetic. Dr. W. E. Steavenson, Electrician to St. Bartholomew's Hospital, kindly gave me his valuable advice and assistance with the battery, and Dr. Day and Dr. Prickett were present. The vagina having been thoroughly douched, I passed three curved needles by the vagina into the tumour. The needles were new, prepared specially for the operation. Except an inch and a half for insertion into the tumour, they were insulated by a thick coating of shellac; moreover, to protect the vagina, they were wrapped round with a strip of lint. The ends of the needles projecting beyond the vulva were connected with the positive pole of a 30-cell (Stöhrer) constant-current battery, all the cells being in use. Dr. Steavenson then applied a flat sponge electrode connected with the negative pole on the left thigh of the patient, moving it gently about for the space of six minutes. The needles were a little difficult to extract, owing to roughening of the points and deposit on and about them during the process. The patient was put back to bed.

It would be tedious to narrate all the notes from this point to the day of death, so I will abbreviate them. For the first four and a half days the patient had no bad symptom. On the evening of August 6th the temperature was 99° and pulse 96. She had a restless night, and complained of pain in the right iliac fossa on the morning of August 7th. The temperature was 101° F., pulse 120, and on examination there was some inflammatory fixing of the tumour, with swelling and great tenderness. I ordered a quarter of a grain of morphine by the rectum, a salicylic mixture, a poultice over the abdomen, and a hot water douche. At 2 p.m. the temperature was 104° F., and I ordered an ice-cap. At 8 p.m. the temperature was 106° F. The ice-cap did not fit sufficiently tightly, and was changed for another. The next morning, at 10 a.m., the temperature was 102° F., and at 8 p.m. 101.4° F. Until the day she died, it never rose again over 101° F. On August 13th the ice-cap was discontinued.

The general treatment consisted of one drachm of Warburg's tincture three times a day, opium or morphine by the rectum as required, ice and iced champagne by the mouth, and four ounces of enemata of beef-tea and brandy, or milk and brandy, every three or four hours. On August 15th she was much better; she had had five hours' natural sleep, and had taken and enjoyed some boiled bread and milk by the mouth, also a little beef-tea and brandy. The pulse was 108, the temperature in the vagina 100° F. On August 16th she was about the same; but on August 17th she had had a restless night, she had been sick, and the bowels were relaxed. On August 18th she was better, and in much the same condition as on August 15th; but on August 19th she was not so well again. This day I had to leave London for the Continent, and I transferred the case to a colleague during my absence. On my return I heard that the patient had remained much as I left her during August 20th and 21st, and died on August 22nd, the *ante-mortem* temperature running up to 105° F. The husband objected to a *post-mortem* examination, but leave was obtained to remove the tumour, and this was done, but the specimen was accidentally destroyed by a nurse before it was examined. Altogether, a more disappointing termination to an interesting case could not be imagined.

From examination by the vagina before I left London, it was clear that the tumour was much reduced in size, and the pelvic thickening had nearly disappeared, and I should fancy that suppuration had occurred, with rupture into the peritoneum.

A fetus of eight or ten weeks would not weigh one ounce; and, if we consider the caustic effect of the electricity and the tremendous destruction caused by it in the five months' fetus at St. Bartholomew's, I should not have been surprised to find that in my case complete disintegration had occurred, and that what was removed for examination was only a collapsed tubal cyst. The case has taught me that galvano-puncture is by no means free from danger, while it is not suitable for cases advanced beyond the fourth month. In a future case I should prefer to use the faradic current daily for several days, as first applied by Dr. Braxton Hicks; and, this failing, to resort to abdominal section further on. Personally, I certainly should not again employ galvano-puncture until we know more about the exact dose that is advisable.

A METHOD OF TREATING SOME CASES OF SCANTY MENSTRUATION AND OF AMENORRHOEA.

By JAMES BRAITHWAITE, M.D. LOND.,

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PUTTING aside cases of deficient or absent menstruation from constitutional causes and from some ovarian affections, many cases of amenorrhœa, or of very scanty menstruation, remain, in which the fault appears to lie with the uterus alone. Some of these cases are attended with the most distressing symptoms, and when the system generally and the ovaries are healthy, relief is urgently required. This is usually sought by the administration of emmenagogues and other well-known remedies, but usually with very little success. It will, I think, be admitted by all who have frequently to treat these cases that the means at our disposal for doing so are very inefficient. A really good emmenagogue has not yet been discovered. The announcement that permanganate of potash is a reliable one was welcomed by the profession. Cases have been published showing very frequent, if not almost uniform, success from its administration. This has not been my experience, and I have given it in not less than forty suitable cases. Any benefit from its use was very seldom met with.

Many years ago, reflecting upon the hæmorrhage caused by intra-uterine polypi, I introduced into the uterus, when I wished to bring on menstruation or to increase its amount, small foreign bodies, which were left in its cavity. At the same time other means of treatment were not neglected, such as the use of hot baths, the administration of iron, aloetic aperients, and alteration in the diet and habits of patients, when luxury and indolence appeared to be at the root of the matter, as they sometimes are. The most convenient foreign body is a piece of hempen ligature, doubled several times, knotted, and impregnated with pitch. These were easily passed up to the fundus without any preliminary dilatation, and left there. Some success resulted from their use; but the uterus generally expelled them before they had done their work, and I therefore abandoned them for a Greenhalgh's rubber stem. This is very efficient, and I have, by means of it, been able to do everything useful in a considerable number of cases. The stem, carefully washed in carbolic water, should be introduced and left in position a week before menstruation is due, or supposed to be due. Usually a hæmorrhage will result within a few days; but the stem should remain *in situ*, whether it comes on or not.

CASE I.—As an instance of the occasional rapidity of this mechanical treatment of amenorrhœa, I can give no better illustration than one I had in December last (1885). A young woman, aged 17, came as an out-patient to the Leeds Infirmary on account of amenorrhœa of four months' duration. She was pale, but not chlorotic, and attributed the amenorrhœa to a chill. No complaint was made of her sight; but on her second visit, in a week, she had to be led into the room, as she was going blind. This loss of sight was already very serious, but it only dated back four days. The disease was ascertained to be optic neuritis, caused by lead-poisoning from the use of dry colouring materials in the manufacture of porcelain. It seemed, however, not improbable that the amenorrhœa, resulting, as it appeared to have done, from suppression by cold, might be a factor in the case, and that relief by a copious hæmorrhage from the uterus would be of use. Accordingly, after slight dilatation, I introduced a Greenhalgh, with the result of bringing on within forty-eight hours a very free sanguineous discharge. Remedies for lead-poisoning were at the same time administered. The neuritis, however, was most acute, and ended in permanent blindness. This deplorable result does not impair the case as an illustration of what can be done by this mechanical treatment in suitable cases. The stem was withdrawn by the girl's mother before the next period was due; but menstruation has recurred regularly up to the present time.

CASE II.—Mrs. M., aged 30, married two years, but childless, was of healthy parentage. She appeared to be, although rather pallid, a strong and vigorous woman, fond of out-of-door exercise, and stated that she could walk some miles without fatigue. During 1883, without any assignable reason, her periods became more scanty, and the colour of the discharge paler. Although her complexion was pallid, she was not anæmic or chlorotic. She next began to have headaches at and preceding the periods, and these soon became exceedingly severe, and more or less continuous between the monthly periods. I

tried bromides in vain, and permanganate of potash had no effect on the amount of the discharge. Her descriptions of the severity and nature of her head-symptoms were very vivid, and led me to think that if no relief were procured, epilepsy would ensue. A very curious symptom also occurred, which impressed me much, namely, that her hair, which was short, dark, and curly, became within a few months quite grey. Although her appearance was not that of a person suffering from fulness of blood, I felt that the case was very urgent, and accordingly subjected her to the stem treatment, with the result that the next period was copious and prolonged. Her head was completely relieved; and at the present, two years afterwards, she is in good health.

I could give numerous instances of the success of this mode of treatment, but I have also met with some failures. Still it is the best and most certain means there is of bringing on absent menstruation, or of increasing the flow where it is present but deficient in amount. Any kind of stem may be used. I have found Wynn Williams's very efficient, and it has the great advantage of not being easily expelled from the uterus, which sometimes occurs with Greenhalgh's rubber stem. I have also used Chambers's stem with advantage, but it is liable to "prick," and I prefer the other two. I have also had made what may be called an artificial polypus, to remain entirely *in utero*.

The treatment of amenorrhœa by means of stems is briefly referred to both by Dr. Barnes and by Dr. Edis in their excellent works on *Diseases of Women*, but the allusion is contained in two or three lines only. There is also a reference to it in a paper by Dr. Routh, in the fifteenth volume of the *Transactions of the Obstetrical Society of London*, but the case given is one of amenorrhœa from obstruction, and requiring the use of the hysterotome. Treatment of amenorrhœa by dilatation of the cervix has been used in America by Dr. Carstens, of the Detroit Medical Society; and as before the use of a Greenhalgh's or Williams's stem it is generally or often necessary to dilate slightly, this dilatation may to some extent assist in producing the result. For several years I thought this mechanical treatment was original, as the well known galvanic stem acts in a different way altogether, and is considered especially suitable for cases of infantile or undeveloped uterus. I am satisfied, however, that the possibility of treating successfully cases of amenorrhœa and scanty menstruation in the way described is almost unknown to the majority of the profession.

LACERATION OF THE CERVIX UTERI, AND ITS RELATION TO MALIGNANT DISEASE.¹

By W. D. SPANTON, F.R.C.S. Ed.,
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THE importance of this condition has been made more manifest since recent observations have shown that it may be the precursor, if not actually the cause, of a large number of uterine ailments. Dr. Thomas enumerates no less than twelve of these as resulting from laceration of the cervix, and among them he places epithelioma. Other authors state the same thing, while some go so far as to declare that a large proportion of the cases of cancer we meet with in that region result from a damaged cervix.

Whether this be accepted as a broad rule or not, the case I am about to mention is an illustration that cancer is sometimes the outcome of a torn cervix; and the frequency of such sequence can be estimated only by long and careful observation of a large number of cases.

The usual effects of a laceration or fissure of the cervix are sufficiently well known, and are most commonly seen in the persistent subinvolution of the uterus, which leads to retroflexion with its attendant discomforts, and to functional menstrual disturbance. In a case which came under my care not long ago, persistent and alarming menorrhagia occurred to such an extent as to place the patient's life in imminent danger. The patient was a married woman, about 36 years of age, whom I saw in consultation with Dr. Partington, in June last. She was then, and had been for six months, suffering from severe but not constant hæmorrhage, passing large coagula with great pain. She had four children, the last one having been born ten years before.

The uterus was large and retroflexed, the cervix deeply lacerated posteriorly, and the anterior lip large, indurated and everted. Various forms of treatment were adopted, including a pessary, but without any benefit, and I then advised Emmet's operation for the cure of the laceration and the removal of the hypertrophied anterior lip. This was done on June 21st, and from that time rapid progress took place. The silver wire sutures were all removed by the tenth day; good

union took place, and the same pessary which before had been useless, was quite effectual in maintaining the proper position of the uterus. Shortly afterwards all hæmorrhage ceased, and the patient is now menstruating regularly, and is perfectly well and active. This instance serves to show how impossible it is to cure the patient suffering from the effects of this condition until the cause of it has been remedied. The signs indeed which we commonly recognise in cases such as this are after all but the results of an anterior condition—the laceration—which must be remedied before any success can be attained in the treatment.

A more important question arises when we come to consider whether and how far the injury I have referred to conduces to the formation of cancer in that region.

A married woman, aged 39, came as an out-patient of the North Staffordshire Infirmary in May last. She was suffering from great uterine discomfort rather than pain, bearing down, and the usual train of symptoms associated with endocervicitis. There was no uterine displacement, no enlargement, but only a deep single fissure through the uterine cervix, both labia being ectropic. There was no indication whatever of anything in the shape of malignant disease.

After finding ordinary treatment of no avail, I advised the performance of Emmet's operation to be performed, and for that purpose the patient was admitted into the Infirmary in July, 1886. After a few days' rest in bed I made an examination, and found a condition resembling that figured in Thomas's work, a deep fissure dividing the posterior lip into two unequal parts, one being slightly more thickened than the other, and having the appearance usually found accompanying erosion of the entrance to the cervical canal. There was some glairy leucorrhœal discharge, with sense of weight and general pelvic discomfort on moving about. For various reasons the operation was postponed until about five weeks afterwards; and when I came to examine the parts for that purpose, I was astonished to find a large mass occupying one half of the cervix, which was clearly malignant in character. So instead of doing, as I had proposed, trachelorrhaphy, I was compelled to remove this cancerous mass with the *écraseur*. The patient soon recovered from the effects of the operation, but, I am sorry to add, is now confined to bed at home with rapidly progressing epithelioma.

We have, therefore, in this instance a clear illustration of the possibility of cancerous growth supervening on simple hyperplasia of a damaged cervix, and, once begun, running a rapid malignant course; and this is the point to which I wish to draw attention. I am quite sure it is one which deserves careful consideration, and should lead us to remedy as speedily as possible every case of laceration or fissure of the cervix which gives rise to symptoms which do not at once yield to the ordinary local remedies.

I have now operated in many of these cases, and have never yet had occasion to regret having done so, nor have I seen, so far, any ill results from the operation itself.

CUCAINE IN LABOUR AND GYNÆCOLOGICAL CASES

By GEORGE H. ROQUÉ DABBS, M.D., SHANKLIN.

As long ago as February, 1885, I wrote a short note to the JOURNAL, stating that I had used cucaïne (a 12 per cent. solution) as a local anodyne to the os and cervix in primiparous cases, and that the application was, so far as I then could say, with my limited experience of its use, worth a trial at other hands. Since that date I have steadily gone on using it, and to simplify my present observations I will tabulate them thus:

1. I obtained equally good results from a 6 per cent. solution as from a 12 per cent. solution (of the hydro-chlorate), but in dry labours I now always use a 4 per cent. solution of the alkaloid itself in castor-oil. Into the thin, parchment-like os I put a cucaïne-saturated plug of cotton-wool, which I renew (or rather replace with a fresh plug) about every half-hour, until fair dilatation has taken place.

2. In cases in which the labour progresses so slowly that some assistance is needed, and yet the cucaïne need not as yet be deposited in favour of chloroform, the form in which I have found ergot of most benefit has been as a hypodermic combination of sclerotic acid, gr. $\frac{1}{4}$, and bimeconate of morphine, gr. $\frac{1}{2}$. By means of Burroughs's tabloids I have been thus able to secure a certain degree more of uterine action, and with the bimeconate of morphine combined with the sclerotic acid and the internal application of the cucaïne, have now seen many cases of almost absolutely painless dilatation of the os.

3. But of all uses for cucaïne in connection with first labours, I have obtained the most gratifying results from the application of a

¹ Read before the Staffordshire Branch.