In these cases a general cause could be put out at once, as also any question of any of the infectious diseases, and we are left with :

1. The bursting of a small ovarian cyst, causing haemorrhage into its interior and subsequent rupture in one case.

2. Ovarian gestation.

3. New growth ; which latter two do not, I think, need further discussion owing to the concomitant circumstances.

4. Haemorrhage from a ruptured Graafian follicle, engorged with blood at the menstrual period, in some of the cases (I, II, and III), the blood effusing into the stroma of the ovary in a similar way to that shown in the specimen referred to above, and in the other case bursting its way through to the surface, and then pouring into the recto-uterine fossa, and thus forming a haematocoele. Vomiting in these cases would be pronounced, both on account of the damage done to the ovary itself, and also of the irritation of the peritoneum set up by the effusion.

As to the possibility of there having been present small ovarian cysts in each case, I do not see the necessity of the hypothesis. There was no previous history of any discomfort—not in itself, it is true, a point of much value ; there was no recurrence of the trouble in two cases at all events to my personal knowledge, nor was there any sign of free fluid in the abdomen at any time.

I have therefore come to look upon haemorrhage from a Graafian follicle engorged with blood at the menstrual period as being the starting point of one set of cases, and it is possible that undue exertion, by increasing the intra-abdominal pressure, as might happen in washing clothes, might be the last factor in determining the rupture.

Of the next class of case I have only seen one example so far.

A patient, whilst still in bed during her convalescence from an attack of acute double lobar pneumonia, began menstruating, and in its course was seized with acute pain in the left iliac region, accompanied by feverishness and vomiting.

Bimanual examination revealed an enlarged, prolapsed, and very tender ovary. This was the first attack of anything of the kind, her last child having been born some eight years before, and her health having been very good up to the time of the attack of pneumonia.

This attack occurred about seven years ago, and the patient still suffers slightly from chronic pain in the left iliac region, especially before the periods. When I examined her a few months ago I could feel that the left ovary was enlarged and bound down by adhesions to the back of the broad ligament, so that it could easily be reached from the lateral fornix. For several other reasons the patient has hitherto refused any operative measures.

Here, doubtless, blood infection by the pneumococcus has to be considered, as either attacking a healthy ovary and setting up an ovaritis, or attacking an ovary in the substance of which blood had been effused owing to the rupture of an engorged Graafian follicle at the menstrual period, and causing an infection of it, and so setting up an inflammation, as in this case ; there was very much more after-effect, and very much more perioöphoritis, as was shown by the chronic pelvic pain, which was not present afterwards in Case IV, and also by the displacement and fixing of the ovary in an abnormal position, due to the adhesions forming between the epithelium covering the ovary and the peritoneum of the broad ligament. Other cases may originate, I think, in sepsis, and the following bears this out :

A multipara, aged 42, whilst menstruating, was taken suddenly ill with pain in the left side, accompanied by vomiting, feverishness, and obstinate constipation. She went to bed, and after a couple of days I was sent for. I found her in great pain, temperature 103°, pulse 110, hard and full ; vomiting constant but not faecal ; the bowels had not been open for some days ; a mass could be felt in the left iliac fossa, and bimanually part of the swelling was found to be situated in the left broad ligament, to be fixed, and to be very tender, and was evidently a cellulitic mass.

On rectal examination the cellulitic mass could be felt to be pressing on the bowel, so that the whole tumour was formed of impacted faeces and a cellulitic mass. The cervix was lacerated on the left side, was in a condition of ectropion, and showed well-marked erosion. The patient had been quite well before the attack.

She was still menstruating slightly, and there was a foul vaginal discharge, and, as was to be expected, I found on inquiry that she had suffered from leucorrhoea for some time but had never had it attended to ; external and internal

haemorrhoids were present, and were painful and inflamed, and the external genitals and thighs were in such a dirty state, being smeared with faecal and blood stains, that I remonstrated with her. She then told me that owing to the piles she had never been able to wear diapers at her periods for years. Taking this condition in conjunction with her illness and the foul vaginal discharge, I came to the conclusion, rightly or wrongly, some slight injury to the cervix, probably marital, had exposed her to septic absorption, and so set up cellulitis, the menstrual fluid affording a better chance of life to septic germs than the mixed cultures ordinarily present in the vaginal canal in her case.

Acting on this opinion I had her thoroughly cleansed, internally as well as externally, by mercurial douches and washes, ordering antiseptic douches regularly. The obstruction of the bowels was relieved finally by enemata, though at one time I thought I should have to do colotomy ; and she made a very quick recovery, the cellulitic mass absorbing rapidly.

CASE OF OBSTRUCTED LABOUR DUE TO OSTEO-SARCOMA OF PELVIS.*

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THE following case, which I have attempted to illustrate by means of a rough diagram, is one of somewhat rare occurrence in obstetric practice.

It is by no means uncommon to find labour obstructed by uterine myomata or ovarian cystomata, but in this instance the new growth had no connexion with either uterus or adnexa. The tumour, which was found later to be a mixed-celled sarcoma, probably dated from the commencement of the patient's second pregnancy, as it was at that time she first began to feel marked pelvic discomfort. Her eldest child was then 9 months old.

I had no opportunity of seeing her before her admission to the infirmary under my care, but I have been able, through the kindness of her medical attendant, to gather the following facts as to the previous history.

Fig. 1.—A, Tumour.

The patient was a young married woman, aged 20. She was one of seventeen children, and one brother, aged 15, suffers from hip-joint disease. She had had one child, now about 18 months old. Her last labour was completed naturally and she made a good recovery. Her menstrual history was normal and she had had no miscarriages. With the exception of a little transient anaemia she had always been healthy.

During the early months of her second pregnancy she noticed a little pain and stiffness in the region of the hips when walking, and there was some alteration in gait attributed by her friends to over-exertion from carrying her growing infant. These symptoms gradually increased, until at the end of the third month she was unable to stand, sit, or lie on her back without great pelvic pain. She never had any actual paralysis of the lower limbs, but was always able to move them about in

* A paper read before the Yorkshire Branch of the British Medical Association.

bed. She became very constipated, lost flesh rapidly, and had severe night sweats.

Any attempt at a vaginal examination caused, I am informed, such intense pain that she could not be prevailed upon to submit to a thorough investigation during the earlier stages of the disease. Matters continued much in this way until labour commenced at term. When her medical attendant was summoned he found a mass blocking up the vagina, and at once ordered her removal to hospital.

I saw her on admission. She was having frequent labour pains accompanied by severe cramps down both thighs and legs; she was very pale and exhausted, and the pulse (115) was feeble and irregular. She could not continue for any length of time on her back, but lay on her side. The legs could be moved and sensation appeared normal. The patellar reflexes seemed a little exaggerated. On vaginal examination a tense globular tumour about the size of a fetal head could be distinguished, pushing forward the posterior vaginal wall in advance of the presenting vertex. The os, which was then about the size of a shilling, could only be felt by passing the finger forward and over the upper surface of the swelling. Rectal examination revealed the fact that the obstruction arose from the hollow of the sacrum and had close bony relations pushing forward the bowel and almost obliterating its lumen. The growth, which was slightly movable, had a tense elastic feel and gave the idea either of a cyst, possibly a hydatid, or a large abscess in connexion with diseased bone.

As the patient's condition was hourly becoming more serious, operative interference was urgently indicated. It was agreed, by all who saw the case with me, that the tumour probably contained fluid of some kind; and I therefore decided to explore by the perineal route and, by evacuating its contents, render delivery possible. The question of Caesarean section was carefully gone into; when, however, a less serious and certainly much quicker procedure seemed available, it did not appear justifiable to expose the patient, already worn out with continued suffering, to the increased risk of the major operation.

Ether was administered by Dr. Garrad and the patient placed in the lithotomy position. I made a curved incision about 3 in. long, an inch behind the anal margin. With a finger in the rectum, careful dissection between bowel and coccyx soon exposed the tumour. It was found to be distinctly encapsulated, tense and elastic. A pair of closed sinus forceps were thrust through the wall and withdrawn with opened blades. On introducing the finger the contents appeared to consist of caseating debris,

and posteriorly large areas of denuded bone with sharp spicules could be made out; the lower part of the sacrum and upper part of the coccyx were quite bare and only connected by a slender bridge of bone.

My first impression was that I had tapped an abscess cavity, probably in connexion with diseased bone, but a closer examination of the contents demonstrated soft,

friable growth intermingled with blood clots. Evidently the onset of labour and the pressure of the advancing head had caused haemorrhage into the interior. The bleeding was very free, and only with great difficulty controlled by pressure and subsequent gauze packing. The patient's condition was by this time extremely critical, and transfusion was at once resorted to, my colleague, Mr. Solly, injecting a pint and a half of saline solution into the median basilic vein. This was followed by marked improvement in the pulse, and she rallied temporarily. The os had not dilated appreciably since the last examination, and her state did not seem to warrant any attempt at forcible dilatation and delivery.

She was removed to bed, and as the effects of the anaesthetic wore off the pains began again, and the os slowly widened; about two hours after the operation, with the advance of labour, she had a smart haemorrhage from the wound, which I controlled with great difficulty. She was now rapidly sinking. Transfusion was again resorted to, but without avail, and she quickly became practically moribund. In the hope of extracting a living child, after a vain attempt to apply the forceps through the still narrow os, I introduced my hand into the uterus, turned, and delivered. Pulsation had ceased in the cord, and all attempts to restore animation failed. The patient died just as the head was being born.

At the post-mortem examination on the following day the uterus, tubes, and ovaries were found to be quite normal. There was no extension of the growth, so far as could be made out, to any of the surrounding viscera, the mischief being confined to the sacrum and coccyx, which were almost separated. The cartilage had resisted the process to a greater extent than the bone. The accompanying photograph of the sacrum and coccyx, from which I have removed most of the soft parts, shows well the extent of the invasion. I also append a drawing of the microscopical appearance of the tumour, taken from a section, kindly cut for me by my friend, Dr. Frederick Johns. It will be seen to be a mixed-celled sarcoma, spindle and myeloid, probably of periosteal origin.

Fig. 2.—Sacrum and coccyx: A, sacral promontory; B, sacroiliac synchondrosis; C, bone eroded by growth; D, top of coccyx. (Photograph by Mr. C. G. I. Eynon, Harrogate.)

Fig. 3.—Drawing of microscopical appearance of growth; H, haemorrhage.

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