form with his head towards the engine and one of his legs towards the carriages; the moving carriage pressing against his leg displaces his femur during flexion of the hip-joint. Would it matter in this case whether the limb were adducted or abducted? What would prevent displacement under such circumstances during adduction of the limb? (*Lancet*, 1872, vol. i, p. 10.) That displacements do occur during adduction has been the prevailing opinion of surgeons; and though they may have been mistaken as to the position most favourable to displacement, we can scarcely dismiss their observations as unworthy of consideration. During the discussion on Mr. Morris's paper, Mr. Maunder adduced the views of Malgaigne in favour of displacement during adduction. Taking down Dupuytren on "Diseases and Injuries of Bones", I find a case in point at page 369: "*Dislocation of the Left Thigh reduced after a lapse of thirty-one days.*—Pierre Guilleminot, aged 21, a labourer of spare habit, whilst wrestling with a companion, was thrown on his left side, the corresponding leg and thigh being carried forwards and *strongly adducted*" (the italics are mine) "so as to cross the leg and thigh of the opposite side. The left femur was thus placed obliquely between the body and the ground; the outer side of the lower part resting on the ground, and the upper part supporting the weight of the body; and by the leverage thus obtained the head of the bone was dislocated upwards and backwards." Are we recklessly to throw such a case overboard because it does not fit in with our cadaveric manipulations? I trow not.

2. Is the capsule always ruptured at the lower part opposite the thyroid notch? Mr. Holmes, in speaking of dislocations produced on the dead subject, says, "In all forms of dislocation the capsule is freely torn away, though to a variable degree, from the rest of the acetabulum, but the upper and outer part of the capsule and the ilio-femoral ligament representing the two branches of Bigelow's Y-ligament remain un torn". (*Op. cit.*, p. 184.) Mr. Callender tells us that "the violence which causes the dislocation and which forces the bone through the capsular ligament ensures also that the latter should be torn to pieces". (*Lancet*, 1868, vol. i, p. 343.) Sir Astley Cooper found in a dissection of a dislocation on the dorsum ilii that the "orbicular" (by which, I presume, he meant the capsular) "ligament was entire at the superior and anterior part only, and it was irregularly lacerated throughout the remainder of its extent". (*Treatise on Dislocations and Fractures*, p. 60.) In dissecting a dislocation on the pubes, he found the capsular ligament extensively lacerated. Mr. Syme found the capsular ligament extensively torn close to the edge of the acetabulum in dissecting a dislocation into the sciatic notch. Hamilton says "that in some cases the capsule being completely, or almost completely, torn away, the muscles offer the only resistance". On the dead subject, I found that by manipulations not very powerful, which effected the dorsal displacement, I had torn away the capsule from the margin of the acetabulum for more than half its circumference, and had ruptured the obturator internus gemelli pyriformis and smaller glutei. The subject was a man advanced in years. These observations appear to be sufficient to show that it is unsafe to indulge in too rigid generalisations on conditions which admit of considerable variety, and that it must be quite impossible to localise rupture of the capsule to one small part in all cases. At the same time, I quite think that where the capsule is torn only to a limited extent, the seat of the rupture will be in the weak region indicated by Mr. Morris, although it is not clear that he is absolutely correct in affirming that the rent will be at the lowest point of the acetabulum below the head of the bone. My colleague Mr. McCarthy has reported in the *Lancet* of 1874 two cases of dissection of dorsal dislocation, and he found the rent posteriorly in each case. "The most posterior part" of the capsule are the words used in describing the position of the rent in the second case, which was uncomplicated with fracture.

3. The third proposition of Mr. Morris, that there is only one primary displacement downwards, and that the varieties of hip-dislocation are secondary thereto. If the capsule can be so freely lacerated behind, it is not necessary for the head of the bone to descend before it ascends on to the dorsum or passes back to the sciatic notch or some neighbouring position. Cases occur, in which it is difficult to reduce the dislocation by manipulation, but which yield readily to extension. Such a case occurred in my own practice at the London Hospital. The displacement was backwards, the so-called sciatic displacement. The patient was put under chloroform, and I tried manipulation as recommended by Mr. Morris, and failed. Mr. Hutchinson and Mr. Couper each took a turn with the same result. I then applied a jack-towel to the limb, placed my bootless foot in the perinæum, and slipping the towel over my head and shoulders made steady traction. Reduction was speedily effected. It is possible that part of the rim of the acetabulum was injured, but that would not have prevented the success of manipulation. Most likely the rent was behind, and in our manipu-

lations we brought the head too low or opposite the spot indicated by Mr. Morris, and therefore failed to effect reduction.

Before demurring to Mr. Morris's conclusions, I should have preferred to see his paper, for possibly he may have anticipated the points which I have raised, and explained them in such a manner that they may support rather than invalidate his views; but inasmuch as the discussion on his valuable paper has been extended beyond the area of the Royal Medical and Chirurgical Society, and Mr. Morris is engaged in strengthening his position, I think it as well to put before him the points which have occurred to me, and may occur to others, after reading the abstract of his paper, and comparing his views with their knowledge and experience of the dislocations which he has done so much to elucidate. These points I will put in the form of propositions.

1. On the dead body dislocation of the head of the femur may be effected with comparative facility during or after abduction, but with difficulty during adduction of the limb.

2. There is nothing absolutely to prevent dislocation of the head of the thigh-bone from occurring in the living subject during adduction of the limb.

3. Experiments on the dead subject cannot be made the complete test of the mode of occurrence of dislocations in the living subject.

4. In the living subject the capsule is often lacerated at once so freely that the head of the bone can escape either downwards, backwards, or backwards and upwards; and, therefore,

5. There is no reason why the head of the bone should pass primarily downwards before reaching the dorsum or the sciatic notch.

6. In the living subject, the capsule seems to be ruptured as frequently behind as below.

CASE OF OVARIOTOMY PERFORMED UNDER SPRAY: PEDICLE TIED IN SECTIONS WITH ANTISEPTIC LIGATURES.

By GEORGE Y. HEATH, M.D.,
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OVARIOTOMY is now so frequently performed, and is so often successful, that I have not hitherto thought it worth while to place any case on record; but, as the present operation was done after the antiseptic method, which, I believe, is not generally adopted in ovariotomy, and the result has been more than usually successful, I think a short account of the case may be sufficiently interesting to justify its publication.

The patient, Mrs. K., aged 54, married but not a mother, was a tall thin person, who for several years had suffered from an ovarian tumour. On February 23rd, the girth round the belly measured forty-eight inches. She was then tapped, and forty-two pints of viscid liquid withdrawn. After the tapping, the swelling entirely disappeared, with the exception of a hard mass as large as a cricket-ball, firmly fixed at the right hypochondrium. The cyst rapidly refilled, and, on April 14th, the patient's size was nearly as large as before the tapping. I considered the case a favourable one for the radical proceeding. After consultation with Dr. Bourne, and the patient being desirous of undergoing the operation and sanguine of recovery, ovariotomy was done on that day in the following manner.

The temperature of the bedroom having been raised to 60 deg., the patient was placed upon a table, and anaesthesia produced by chloroform and kept up by ether. The administration of these agents was undertaken by Dr. Hope, and carried out in his usual careful and efficient manner.

I was assisted by Dr. Bourne of North Shields, the patient's usual adviser; by my friend Dr. Barron, and by Mr. Williamson, the senior house-surgeon of the Infirmary. A steam-spray was placed upon a raised platform in front of, and about four feet from, the patient's belly, so that the finer particles of the spray only should fall upon the wound. The skin of the abdomen was washed with the one to forty solution of carbolic acid, in which the instruments and sponges to be used, as well as the hands of those engaged in the operation, were immersed. Towels wrung out of the same solution were placed beneath the patient and over the lower part of the belly and the vulva. Antiseptic guards of new flannel were also provided, to be used in the way hereafter mentioned.

The incision, of medium size, was made in the usual way, and, the cyst having been exposed, a small opening was made in it before commencing its separation from the peritoneum, and about a third of the contents allowed to escape. The cannula was then introduced, and the sides of the opening held firmly around. The hand was next passed between the cyst and the peritoneum. Extensive adhesions

existed both to the omentum and the intestine; they were, however, readily broken down by the finger, except at one part, where the cyst was closely attached to the right bend of the colon. Great care was required in separating the attachments at this point.

As the tumour was gradually detached, it was being drawn out of the belly and its contents evacuated. The pedicle was broad and short, but thin; it was divided by the fingers into four portions thicker than the rest; each of these was firmly tied low down with a medium sized antiseptic silk ligature, the ends of which were cut short and the sections of the pedicle divided about half an inch beyond the ligature. Each section, after division, was found to contain a single blood-vessel. But little blood was lost during the operation. A small quantity of bloody liquid was sopped up out of the pelvic basin with an aseptic sponge after the removal of the cyst. The sides of the wound were brought together with fine sutures of antiseptic silk. The usual antiseptic dressings were then laid over the wound and belly, the wet clothing, etc., removed, and the patient, dry and clean, lifted to the bed and placed upon a tailed bandage, the dressings being fixed after the removal to bed. Consciousness returned about ten minutes after the removal to bed.

The steam-spray played upon the wound during the whole period of the operation and subsequent dressing. The flannel guards were used, so as to prevent any exposure of the abdominal cavity during the operation, to absorb the superfluous spray, and to prevent the antiseptic liquid from entering the bag of the peritoneum.

The operation occupied half an hour from the commencement of the anaesthesia to the completion of the dressing. Half an hour after the return of consciousness, a suppository of opium and belladonna was administered, and, half an hour later, a small enema of beef-tea, which was ordered to be repeated every three or four hours.

At 6 P.M., the patient was perfectly comfortable; there had been no sickness nor pain. Pulse, 98; temperature, 99 deg. The urine had been drawn. The enemata had remained.

April 15th. The patient had passed a good night. There was no pain or sickness. Pulse, 99; temperature, 99 deg. Urine was passed voluntarily; enemata were retained. The wound looked closed; the dressings were hardly stained; the belly was flaccid; there was no tenderness, except at the right hypochondrium, where the bend of the colon felt thick. The enemata were continued.

It is unnecessary to give the daily details of the case. The patient's progress to recovery was uninterrupted. The temperature never rose to 100 deg., nor the pulse above 100, and that only twice, when the patient was somewhat fatigued by the dressings; for the pulse usually ranged from 90 to 98, and the temperature from 98.3 deg. to 99.4 deg. Fourteen days afterwards, the pulse and temperature were for the most part normal. For three days, nourishment was given by the rectum, a teaspoonful of warm milk and water only being occasionally taken into the stomach; afterwards, liquid food was swallowed in small quantities at a time until the end of the first week, when fish was allowed and, by degrees, more solid food. On the sixth day, the bowels were moved naturally, and every two or three days afterwards either naturally or with the aid of warm water injections. On the seventh day, two stitches were taken out, and the remainder on the tenth day. The wound was dressed with antiseptic dressings—at first every second, afterwards every third or fourth day—and healed almost entirely by the first intention.

Tenderness over the right bend of the colon remained for two or three days, and considerable thickening could be plainly felt in the wall of the colon, apparently, at my last visit to the patient, on May 9th, when I found her out of bed, dressed, and walking about her room.

It would be unreasonable to say that the recovery in this case was owing to the antiseptic treatment, seeing how often patients recover after ovariectomy, where only ordinary precautions against septic infection are employed. The patient was a good subject for operation: spare in frame, of a calm disposition, cheerful, and sanguine of recovery. The tumour also consisted of a single cyst with but a small amount of more solid matter. Making every allowance for these favourable circumstances, I think the antiseptic precautions adopted may, however, fairly be credited with the immunity from fever, and with the smooth steady passage of the case to recovery, undisturbed by any unpleasant symptoms. The partial evacuation of the cyst before its separation from the abdominal wall seems to diminish the risk of the contained fluid entering the peritoneal cavity, whilst the ligature of the pedicle in sections low down is likely to favour the retraction of the cut ends and their envelopment in lymph.

In conclusion, I think it only right to express my obligations to the nurse, Miss Stanton, for her extremely careful and intelligent services to my patient.

SURGICAL MEMORANDA.

CARBONATE OF LIME CALCULUS EXPELLED FROM THE BLADDER OF A FEMALE.

ON November 4th of last year, I was summoned to attend a young married lady of delicate constitution with her first child. The pains were, previously to my visit, feeble and irregular. Upon examination, the os uteri was found to be fairly dilated, and easily made so by steady pressure with the finger; the edges of the os were extremely thin; the vagina was relaxed, cool, and moist. Liquor amnii had escaped. The presentation was natural; the head well down in the pelvic cavity. She was highly nervous and feeble. After my arrival, the slight pains which she had experienced entirely ceased, and manifested no signs of any recurrence. Nourishment (milk with brandy) was freely administered at stated intervals. There was, in fact, complete uterine inertia, without hemorrhage. After waiting a reasonable time, in order to recruit her exhausted condition, I deemed it advisable to effect delivery, without further loss of time, with the aid of the forceps, as it was evident that nature was not equal to the task. The head was quickly brought down to the os externum, where it was permitted to remain for some minutes. The patient throughout was incapable of aiding in the least. A dose of ergot was given with sal volatile in brandy and water; the blades of the forceps were reapplied, and delivery of a viable full-grown child effected. After waiting the usual time of twenty minutes without any manifestation of uterine pain, a second dose of ergot was had recourse to, previously to any attempt at withdrawing the placenta, which was accomplished in about fifteen minutes, under the influence of slight uterine action. Nothing but a natural discharge ensued.

For some days she remained weak and helpless. The urinary excretion was scanty and passed with difficulty. The lacteal secretion was only slight on the fourth day, and became totally suppressed after two days. Her recovery was tedious, although a liberal regimen with quinine were prescribed. After a month's careful watching and steady nursing, she was, when retiring to rest, suddenly seized with inability to pass urine, owing to experiencing some obstruction, with bearing-down sensations, at the neck of the bladder, which at the time were regarded in the light of nervousness by her friends. At her solicitation, the husband, however, called upon me late in the evening and requested to have some medicine, when a mixture of bicarbonate of potash with spirit of nitrous ether and tincture of hyoscyamus was prescribed. On visiting her next morning, I found that, after taking two doses of the mixture, the bladder was enabled to evacuate its contents; and at the same time a calculus of pure carbonate of lime was passed into the urinal, with immediate relief to the patient. After this, she progressed satisfactorily, and, up to the time of her removal from the neighbourhood, had no return of the vesical symptoms.

The case is interesting, as I should say calculi composed purely of chalk are rare, not having met with a similar concretion, although I have in my possession several varieties of stone which I have removed by the operation of lithotomy. The calculus weighed upwards of forty grains, being friable, smooth, and white; its length was one inch; its width was half an inch.

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RARE CONDITION OF THE KNEE-JOINTS IN A CHILD.

A. L., AGED 7 months, brought to the National Orthopaedic Hospital on May 14th, is suffering from a condition of the knee-joints such as has not, I believe, been previously described. When the limb is extended, the bones entering into the formation of the right knee-joint are in their normal positions; but, on flexing the leg on the thigh, the tibia is rotated outwards, and partial lateral dislocation of the bone occurs in the same direction, the patella remaining in place. On again extending the leg, the dislocation is reduced with a loud snap, which, when the act of extension is quickly performed, is distinctly audible. In the left knee-joint, the same condition is present, but not so well marked as in the right. The child, a strong and muscular one, is, the mother says, in the habit of flexing and extending the legs with considerable force.

The production of the dislocation is, in my opinion, to be ascribed to the laxity of the crucial ligaments, which are unable to resist the action of the biceps during flexion of the joint, when this muscle is in the most favourable condition for exerting its power. Whether this weakness of the ligaments has been produced solely by