

Oct. 13th.—8 A.M.: Looks anxious and pinched; pulse the same; tongue coated and dry; has suffered much from dyspnoea and orthopnoea during night, and has not slept; urine has passed freely through wound, but he complains of a considerable amount of pain there; the sitting posture maintained throughout the night has caused the drainage-tube to disappear into the bladder; tube removed by traction on a tape attached to it; has vomited several times, and suffered much from painful diarrhoea and tenesmus. To take one ounce of compound chalk mixture, with ten minims of tincture of opium after each evacuation.—8 P.M.: Diarrhoea ceased after two doses of mixture, a little urine passing through wound.

Oct. 14th.—6 A.M.: Pulse the same; tongue cleaning and moist; no more diarrhoea; slept a little during the night; orthopnoea much less; has passed no urine since last visit; much pain in region of bladder, which is distended; catheter drew off a large quantity of urine, not so offensive as before operation. To take twelve minims of dilute nitro-muriatic acid in water twice a day, with wine and beef-tea. From this time all the symptoms gradually improved, but no urine was voided without the aid of the catheter, which was passed twice a day until

Nov. 2nd.—Urine less offensive, no albumen; has passed a tablespoonful per urethram; wound almost healed; anasarca and orthopnoea quite disappeared; can sit in his chair for an hour or two at a time. Catheter to be passed twice daily.

Nov. 23rd.—Can now pass by natural efforts in twenty-four hours about a pint and a half of urine, which is still offensive. Catheter to be passed, and bladder to be washed out (by repeated injections of three ounces of water) once a day. Washing out to be followed by the injection of two ounces of solution of acetate of lead (one-eighth of a grain to the ounce), allowed to remain two minutes; to be continued six days.

This treatment was followed by marked benefit; the urine by degrees became almost natural, and the patient much stronger, until Dec. 9th, when he went out of doors and got wet. This induced a mild attack of influenza with catarrh of the bladder, and the urine became as mucopurulent and offensive as at first. Catheter to be passed twice a day, and the injections recommenced.

Jan. 8th, 1870.—Much improved; catheter and washing once a day; lead injection to be discontinued.

Feb. 1st.—Walked a distance of two miles to my house. Washing out to be discontinued.

The catheter was passed once a day until March 11th; every other day from that time till April 3rd; and afterwards twice or thrice a week until June 29th, when he again got wet, and the bladder symptoms became as severe as ever. Catheter twice daily, and washing out and injection as before.

July 28th.—No improvement. Bladder to be washed out daily with cold water.

July 31st.—The cold injection has produced smarting of bladder and urethra, lasting for a few minutes. Its use to be continued for a week. No stone can be felt in the bladder.

Aug. 7th.—Is quite strong and hearty, and can work in his garden. Has no pain nor difficulty in micturition.

This appeared to be an almost hopeless case for lithotomy; but whatever the result, it seemed better to make an attempt to relieve his sufferings than to let him linger on in misery. I think its successful issue was due principally to the persistent use of the catheter—which was passed more than 400 times, so that no irritating urine was allowed to remain in the bladder—aided, no doubt, by pure country air and the quickness of the operation, which was fortunately completed in less than two minutes, although the fourth calculus eluded the grasp of the forceps three or four times.

During the progress of the case nearly all the remedies which have a reputation for allaying irritation of the bladder were prescribed, but without the slightest apparent benefit. Washing out the bladder with warm water appeared at first to do good, and was always grateful to the patient's feelings; and the use of the lead solution was followed for a time by marked improvement. The cold water injection seemed to act almost like a charm.

Second operation.—The same patient was admitted into the Petersfield Cottage Hospital on Nov. 6th, 1871. He had been suffering for the last two months with frequent

desire to pass urine, which was offensive, and at times mucopurulent; but he appeared to be much stronger than before the first operation, and there was no anasarca. A small stone could be felt with the sound, but could not be moved.

Nov. 9th.—Two years and a month after the first operation I again performed lateral lithotomy, making the incision through the cicatrix of the old wound, which was thickened, and offered considerable resistance to the knife. The prostate was as large as a small orange, and hard, and behind it was a small uric-acid calculus, about the size and shape of a large flattened raisin, and firmly encysted. I could not grasp it with the forceps, but after enlarging the wound in the prostate with a blunt-pointed bistoury I succeeded, with much difficulty, in dislodging it with my finger, with which I could just reach it. I explored the bladder carefully with forceps and sound, and once thought I struck another stone to the left, but was unable to find it a second time. Mr. Cross examined with a like result, and two medical friends present could not feel any calculus, so we concluded that we must have struck the sound against a ruga of the bladder. The same treatment was adopted as after the former operation, and he seemed to be going on tolerably well until Nov. 14th, when he suddenly became much weaker, and gradually sank, and died from exhaustion on the 18th.

Post-mortem examination.—Wound half healed; no extravasation of urine, nor signs of inflammation in peritoneal cavity; lymph between peritoneal and mucous coats of the bladder over the fundus, where the muscular fibres were almost obliterated; muscular coat much thickened round the neck and on the left side; mucous coat thickened and eroded here and there at the fundus; about a teacupful of offensive urine in the bladder. On the left side was a phosphatic calculus, so encysted as to be virtually outside the cavity of the bladder, being covered merely by its mucous and peritoneal coats. The muscular fibres, which were much thickened near it, seemed to form a kind of sphincter to the cavity in which it was contained, and it would have been impossible to dislodge it during life. It was oval, flattened, weighed 160 grains, had no nucleus, nor were there any facets upon its surface.

The existence of the sphincter-like fibres around the orifice of the cavity which contained the stone appears to explain the fact that both myself and Mr. Cross thought we felt the stone once, but not again, as they were probably at one time relaxed so as to allow the sound to strike against it, but generally contracted so as to quite shut it out from our reach.

This second case presents a marked contrast to the former. The patient's health was better, and he appeared to have comparatively a good chance of recovery. The difficulty experienced, however, in dislodging the first stone, and the search after another, protracted the operation. To this fact, I think, the fatal termination was due rather than to the presence of the second calculus, as the inflammatory exudation was confined to the fundus, and there was merely thickening of the muscular fibres near the encysted substance. He apparently never quite rallied from the shock of the operation, and there was no inflammatory action sufficient to account for his death.

Petersfield.

ON THE PRODUCTION OF A REMARKABLE ENDO- CARDIAL MURMUR, ACCOMPANIED WITH UNUSUAL SLOWNESS OF THE PULSE.

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A MAN, forty-five years of age, came as an out-patient to King's College Hospital complaining of a beating or throbbing at the epigastrium, with pain and tenderness in that region. He complained also of great dyspnoea, and stated that he had suffered from four attacks of rheumatic fever. On examination, a distinct beat, synchronous with the pulse, could be felt rather low down in the epigastric region. It was lower than ordinary epigastric pulsation,

and the heart's apex beat in the natural position. His pulse was regular and of good volume, but very slow, beating only 36 to the minute. On listening over the heart's apex, a very remarkable complex bruit was heard. There was first a loud prolonged systolic murmur, and then, immediately after, two short sounds; so that between each beat of the heart we heard three distinct murmurs: a long and loud murmur (systolic), a short and softer murmur (post-systolic), and another short and soft murmur (pre-systolic). The unusual slowness of the heart's action enabled us to separate this complex sound very easily and distinctly into its component elements. Systolic and diastolic aortic murmurs were also audible at the base.

A few days after the appearance of this patient at King's College Hospital his wife came to say that he had died rather suddenly the night before. As I was desirous of satisfying myself—(1) as to the cause of the epigastric pulsation and pain (this being the man's chief trouble); (2) as to the precise condition which gave rise to the curious murmur we heard; and (3) as to its connexion with the unusual slowness of pulse, I asked and obtained permission to make a post-mortem examination.

On opening the chest we found the pericardium uniformly adherent to every part of the heart's surface. The heart was flabby, its cavities considerably dilated, and their walls thinned, that of the right ventricle being very thin. The right side of the heart was distended with clot, and so was the left auricle, which was enormously dilated to three or four times its natural size. The mitral orifice was considerably diminished in circumference, the segments of the mitral valve were thickened, somewhat puckered at their free edges, and adherent to one another by their adjacent margins. The orifice was nearly circular in form, and about three-fourths of an inch in diameter. The aortic valves were also thickened, and to some extent disabled. A slight festooned fringe of fibrin was observed just beneath the free margin of each valve, and two of the valves were adherent by their contiguous sides.

We can now see how the physical signs observed during life were produced. The first loud and long bruit heard at the apex was clearly a regurgitant one, accompanying the systole of the ventricle. The next short sound was *post-systolic*, and caused by the commencement of the flow of blood from the auricle into the ventricle through the contracted and somewhat rigid mitral valve (or it may have been produced, as Dr. G. Johnson suggests, who examined the case with me, by aortic regurgitation, and in that case was diastolic aortic). The third sound was pre-systolic, and coincided with the contraction of the greatly dilated auricle, which slowly and with difficulty gathered up force enough to complete its systole. We can also understand how the retardation of the pulse was brought about. The ventricle had to wait, as it were, on the auricle; and the auricle, owing to its great distension, and the thinness of its walls, could only empty itself slowly and with great difficulty. In this way the pulse was delayed, and death was probably caused by the inability, at length, of the left auricle to empty itself.

The epigastric pulsation, so much complained of during the life of the patient, seemed to be due to the uniform adhesion of the pericardium, by means of which the diaphragm was so stuck to the surface of the heart that at each pulsation it moved with it, and its movements were conveyed by a flatulently-distended stomach to the surface.

St. James's-street, S.W.

ON TWO CASES OF CLOSURE OF THE VAGINA.

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CLOSURE of the vagina, more or less complete, is a condition not very uncommonly met with, but in a great majority of instances it is merely the result of some malformation of the hymen. The two following cases, however, are examples of much rarer forms of irregular development of the genital organs: in one, the vagina was to all appearance completely closed about an inch above its orifice, but was in reality carried up to the uterus by a narrow, fistulous track, difficult both to

discover and to dilate; in the other, the vagina was altogether occluded at its upper end where the uterus should be inserted into it, and this latter organ was absent.

CASE 1.—E. H.—, aged twenty-four, married, was admitted to the Halifax Infirmary on August 7th, 1872, and gave the following history:—The patient had been married ten months; before this she never suspected that there was anything amiss, but soon afterwards began to suffer from various vague dyspeptic and hysterical ailments. Coitus had never been complete. The catamenia had always been regular, and had continued so after her marriage for about four months, since when there had been no discharge, but each period had been marked by the occurrence of violent pain in the back and belly. There had been no enlargement of the abdomen.

On examination of the genital organs it was found that, although the external parts and nymphæ were sufficiently well-developed, the vagina was a mere cul-de-sac, about an inch in length. The finger being introduced into the rectum and a sound into the bladder, it became evident that above this cul-de-sac the vagina was absent, the sensation imparted to the finger making it certain that there was only a very thin layer of tissue interposed between it and the point of the sound; further up, however, the bladder and rectum were separated by a mass occupying the position of the uterus.

The undoubted occurrence of the catamenial discharge made me feel certain, not only that there was a uterus, but that a passage to it must somewhere or other exist. On more minute inspection, it was found that about half an inch behind the urinary meatus there was a small orifice in the upper wall of the rudimentary vagina; this, however, also at first appeared to be merely a blind pouch, the sound not passing into it more than a quarter of an inch; but by the exercise of considerable patience, I was enabled to introduce a bent probe to the extent of about three inches, passing it up a sort of sinus of which this orifice was the external opening. The great tenuity of the parts made it necessary to use the utmost gentleness in handling the probe, the point of which, however, was felt by the finger in the rectum to have arrived close to the mass already mentioned as occupying the situation of the uterus. From this examination it appeared that in place of the vagina there existed only a fistulous track leading from the uterus to the external parts, and from the absence of all history of violence or injury one was forced to believe that this condition was a congenital defect.

The treatment adopted was dilatation by laminaria tents. At first it was not possible to make one enter for more than half an inch, but when this had become swollen, it was found practicable to introduce a second to its entire length; and after this, dilatation was carried on by the use of a gradually increasing mass of laminaria, until the fistulous track, which stood in the place of a vagina, was enlarged to such an extent that a speculum could be passed with ease. This process of expansion, however, was clearly not altogether free from risk; a considerable discharge was set up, and several times such an amount of fever arose, with pain and tenderness of the abdomen, that all active measures had to be desisted from, and recourse be taken to salines, sedatives, and fomentations.

On examination with the speculum, the os uteri was readily seen, not, however, standing upon a neck, but attached all round to the walls of the new vagina; the uterine sound was introduced, and entered to the depth of two inches, and on examination per anum, while it was in position, it was found to have passed to that extent into the uterine substance.

She left the infirmary on Oct. 16th. On Nov. 5th she states that the catamenia have again appeared, having been preceded for a couple of days by considerable pain, which, however, ceased on the establishment of the discharge. Since she has returned to her home she has lost her dyspeptic pains, has gained flesh, and considers herself well.

CASE 2.—M. H.—, aged nineteen, was brought to me on Nov. 10th, 1872, when the following notes were taken:—Is a thin, ill-developed-looking, flat-breasted girl; she has never menstruated, nor has she ever felt any of the usual symptoms of commencing menstruation.

On examination, it is found that the vagina is roomy, but very smooth and thin-walled, that its upper extremity does not contain a cervix uteri, and that the finger perceives no