be detected on microscopical examination, while glycogen, urea, and some other substances may be shown to be present by chemical analysis. Not only so, but the quantity and the relative proportions of the respective constituents may be caused to vary by alterations in the food constituents. This is a matter of great interest to us, for when an organ is deranged by injudicious feeding we can in some cases, by a change in the diet for a sufficient period, and by the help of certain medicines, promote an increase or reduction in the amount of the constituents of which there may have been deficiency or excess, or we can encourage the removal of some substances from the organism and promote the retention of others. The different classes of substances formed in varying proportions such as proteids, fatty matters, salts, and carbohydrates, also vary according to the conditions under which the organism for the time lives. In some cases an organism may be caused to produce and to accumulate fat to an enormous extent, and it may more than double in weight within a short time, or, on the other hand, the animal may be kept lean and highly active—in fact, its muscular and nerve power may be increased and thus it may be made to perform work which would have been impossible if a large proportion of adipose tissue existed. But neither of these processes—the formation of fat or its removal—could be brought about in the absence of a special power operating in living things only, the increase of adipose tissue as well as its removal being effected by living matter. And we must bear in mind that the too rapid removal of the fat of adipose tissue by great changes in diet may endanger life.

Physiological and pathological phenomena include vital actions and depend upon vitality. They are not to be imitated or to be adequately explained by physics or chemistry in the present state of knowledge. We must in all cases admit the operation of a power communicated by pre-existing living matter to non-living matter of a certain composition and in a certain condition. Thus has the earth been peopled by successive generations of countless living forms of the most different kinds, all of which and at every period of existence have been dependent upon vitality, being also subject to pathological changes and various forms of disease.

TWENTY-FIVE CONSECUTIVE CASES OF STRANGULATED HERNIA; ONE DEATH.¹

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DURING the last few years it has fallen to my lot to operate on 25 cases of strangulated hernia, of which only 1 died as a direct result of the operation. To simplify this paper I have appended a table of the cases. Twelve occurred in men, and 13 in women. The ages varied from twenty-six to seventy-eight years, 6 being over sixty and 3 over seventy years. The period of strangulation varied from ten hours (cases Nos. 11 and 22) to five days (case No. 16). The bowel in 1 case (No. 16) was greenish and had a putrid smell, but retained its shiny appearance. The omentum was gangrenous in Case 20 and the fluid in the sac, of course, decomposed and was very offensive, although the bowel looked alive, and recovered. The bowel alone was present in 9 cases; the bowel with omentum was present in 12 cases; and the omentum alone was present in 2 cases. Omentum was removed in 11 cases; the portion removed varied from a "mere tag," in Case 18, to a pound, in Case 10. Omentum formed a complete sac, adherent universally to the peritoneum, in Case 24, an umbilical hernia, and contained a large loop of strangulated small bowel. In Case 14 there were 3 hæmorrhages in the omentum, one of which looked at first sight like a knuckle of intestine. In Case 15 there was diffuse cellulitis of the abdominal wall, with sloughing of the convexity of the sac; all the sloughs

were cut away, and the tissues swabbed with pure carbolic acid (the bowel being protected) before dividing the constriction, so that neither putridity nor acid could enter the abdominal cavity. This was of course a very serious complication, but the woman recovered with a fæcal fistula. The bladder was present alongside a strangulated right inguinal hernia in Case 25, a very rare occurrence. Up to 1893 only 59 cases had occurred in surgical literature,² and Macready³ had only been able to collect 36 cases.

Details of procedure.—Chloroform was used as an anæsthetic in every case, although in Case 10 only a few whiffs were given, the patient being deeply cyanosed from a very acute attack of bronchitis. His knees were strapped down and his hands held whilst the skin incision was rapidly made. He was by no means "under chloroform." The anæsthetic was laid aside and the remainder of the operation conducted with the man conscious, and he experienced no pain during the necessary manipulation of the sac, intestine, and the removal of a pound of omentum; but when the sutures were being passed through the skin his language was "frequent and painful and free." In Case 20, an old man aged seventy-six years, with chronic bronchitis and emphysema, was operated upon propped up in bed with four pillows. Mr. Caregan administered a few drops of chloroform; with my left elbow I kept the patient's knee down and held a dissecting forceps in my left hand, the knife being in the right. The operation was quickly completed; it necessitated the removal of two pieces of gangrenous omentum, the return of the bowel, the ligature of the sac, and the introduction of only one suture in the skin. Both these cases recovered without a bad symptom. In all the operations speed was particularly cultivated and I believe had much to do with the happy result.

Treatment of the contents of the sac.—Investigations have demonstrated the poisonous nature of the fluid found in the sac of strangulated hernia. I need only quote Nepveu and Garré,⁴ who found bacteria, and these did not appear to bear any relation to time or degree of strangulation (putridity apparent to the sense of smell being no guide). Clado⁵ inoculated animals with fluid from the sac of a strangulated hernia. The animals died, and the organisms were found in the blood, spleen, lungs, and the serous cavities. He considers death in strangulated hernia due to the introduction of organisms from the intestinal tract into the general circulation. This position is strengthened when we bear in mind that about 10 per cent. die when the strangulated hernia is reduced by taxis. Benno Schmidt⁶ considers the field of operation in strangulated hernia already septic. Bearing in mind these and similar statements by many investigators, special attention was paid to disinfection of the sac contents as soon as opened and before any attempt at reduction. This was always carried out by freely washing the fluid away with hot 1 in 40 carbolic lotion, until every shred of lymph and blood-stained material was thoroughly removed from amongst the coil or coils of intestine and the interstices of the omentum when present. When it was decided to remove omentum a fresh portion was dragged down and this ligatured and divided, when the piece in the sac, being now deprived of its blood-supply, could be forcibly torn away, if adherent, without risk of hæmorrhage. This method materially aids rapidity of procedure.

Radical cure.—In the worst cases, and in the old people, Czerny's radical cure, simple ligature of the neck of the sac, was performed, Macewen's method being used in the younger patients and in those cases where urgency was not so imperative and a more certain radical cure indicated. Two cases (Nos. 4 and 17) had congenital inguinal sacs, and the portion cut off for a tunica vaginalis was closed with a continuous catgut suture.

Treatment of wound.—Silkworm gut sutures, double cyanide gauze under wool tissue, and a suitable bandage or binder were used. In only two were there wound complications—Case 15, where a fæcal fistula formed, and Case 25, where the wound suppurated, necessitating the reopening of the inguinal canal. This was due to contamination with ammoniacal urine from a hernia of the bladder, which complicated the case. It occurred in a man aged fifty-nine years, who was admitted into the infirmary for strangulated hernia, and operated upon at once (11.30 P.M.). He

² Deutsche Zeitschrift für Chirurgie, Leipzig, 1893, p. 301.

³ Ruptures, Macready.

⁴ Centralblatt für Chirurgie, No. 50, p. 859.

⁵ Revue de Chirurgie, 1889, p. 927.

⁶ Berliner Klinische Wochenschrift, 1883, p. 308.

¹ A paper read at the Liverpool Medical Institution on Jan. 30th, 1896.

TWENTY-FIVE CONSECUTIVE CASES OF STRANGULATED HERNIA.

No.	Age.	Sex.	Where operated, and date.	Doctor's case.	Variety of hernia.	Strangu- lated time.	Contents of sac.	Condi- tion of bowel.	Details of operation.	Result.
1	58	M.	Ormskirk Workhouse, Dec. 19th, 1891.	Mr. Anderton.	Right scrotal.	2 days.	8 inches of bowel and omentum.	Dark purple.	4 oz. of omentum re- moved; Ball's radical cure.	Cured.
2	30	M.	Liverpool Royal Infir- mary, Nov. 12th, 1892.	—	Right inguinal.	?	Loop of the bowel.	Dark purple.	Ligature of the neck of the sac.	Do.
3	76	M.	Wavertree, Nov. 26th, 1892.	Dr. O'Hagan.	Left scrotal.	2 days.	4 inches of bowel, omentum congested and hæmorrhagic, blood-stained serum 2 oz.	Dark purple.	The ring was incised; neck of the sac liga- tured.	Died.
4	26	M.	Liverpool Royal Infir- mary, Jan. 8th, 1893.	—	Right scrotal.	19 hours.	6 inches bowel; con- genital sac strangula- tion by external ring; bowel in canal normal.	Dark purple.	The sac was divided; the tunica vaginalis was sutured for testicle; the neck was ligatured.	Cured.
5	69	F.	Private house, June 5th, 1893, 12.30 A.M.	Mr. Edwards, Anfield.	Left femoral.	3 days.	"Large knuckle" (no omentum).	Dark purple.	Gimbernat's ligament was incised and the neck of the sac ligatured.	Do.
6	36	M.	Liverpool Royal Infir- mary, June 25th, 1893.	—	Right inguinal.	3 days.	About 4 inches of bowel.	Dark purple.	The sac was ligatured (funicular process).	Do.
7	61	F.	Liverpool Royal In- firmmary, July 28th, 1893.	—	Left femoral.	Obstructed, going on to stran- gulation, 1 week.	Knuckle of bowel, mass of omentum.	Dark purple.	Gimbernat's ligament was nicked. The neck of the sac was ligatured and omentum removed.	Do.
8	78	F.	Private house, Oct. 20th, 1893.	Mr. Laing, Burscough.	Left femoral.	2 days.	Knuckle of bowel, flakes of lymph.	Dark purple.	Reduced without in- cision of the neck; ligature of the sac.	Do.
9	30	F.	Liverpool Royal Infir- mary, Oct. 28th, 1893.	—	Left femoral.	—	5 inches bowel and adherent omentum.	Dark purple.	Removal of omentum.	Do.
10	43	M.	Liverpool Royal In- firmmary, April 14th, 1894.	—	Umbili- cal.	2 days.	4 inches small gut and omentum.	Dark purple.	1 lb. of omentum re- moved; neck of sac tied.	Do.
11	34	M.	Liverpool Royal In- firmmary, April 23rd, 1894.	—	Right inguinal.	10 hours.	—	—	—	Do.
12	58	F.	Liverpool Royal In- firmmary, April 12th, 1894.	—	Left femoral.	24 hours.	2½ inches of intestine and omentum.	Dark purple.	Removal of omentum; ligature of the neck.	Do.
13	39	M.	Liverpool Royal In- firmmary, April 29th, 1894.	Mr. Dunn.	Right inguinal.	12 hours.	3 inches of intestine.	Dark purple.	Macewen's radical cure.	Do.
14	52	F.	Liverpool Royal In- firmmary, May 6th, 1894.	—	Left femoral.	2 days.	Omentum only, with 3 blood cysts (simu- lated bowel).	—	3½ oz. of omentum removed; adherent around two-thirds of the orifice.	Do.
15	53	F.	Liverpool Royal Infir- mary, Oct. 8th, 1894.	—	Um- bilical.	3 days.	Loop of large bowel, omentum.	Odorous but shiny, omen- tum sloughy.	Portion of the sac re- moved; sloughy cellu- lar tissue of abdomen suppurating, constric- tion divided, omentum removed, sac tied.	Do.
16	52	F.	Liverpool Royal Infir- mary, Dec. 3rd, 1894.	—	Um- bilical.	5 days.	Loop of bowel and omentum.	Dark purple.	Operation rapidly per- formed; bowel pushed back.	Died same night.
17	55	M.	Liverpool Royal In- firmmary, Dec. 9th, 1894.	—	Left inguinal.	12 hours.	Congenital sac, large loop of bowel.	Dark purple.	Tunica vaginalis made and sutured for testicle. Macewen's radical cure.	Cured.
18	45	F.	Liverpool Royal In- firmmary, Jan. 14th, 1895.	Dr. McGibbon.	Left inguinal.	2 days.	Omentum only.	—	Large amount of in- flamed extra-peritoneal fat removed; sac treated <i>à la</i> Macewen; tag of omentum removed.	Do.
19	50	F.	Private House, March 8th, 1895.	Mr. Laing, Burscough.	Right inguinal.	12 hours.	Knuckle of bowel and tag of omentum adherent to sac.	Dark claret.	Omentum removed; neck of sac ligatured.	Do.
20	76	M.	Private House, June 16th, 1895.	Mr. Caregan, Ormskirk.	Left inguinal.	2 days.	Knuckle of bowel; sloughy omentum; stinking blood- stained serum.	Dark purple, shiny.	Omentum was removed; the sac was well puri- fied; ligature around neck; one suture in skin.	Do.
21	64	F.	Liverpool Royal In- firmmary, June 30th, 1895.	Dr. Samuels.	Right femoral and left femoral.	Left; 24 hours.	Knuckle of bowel.	Dark purple.	Gimbernat's ligament was nicked; Macewen's radical cure; right hernia chiefly extra- peritoneal fat; noth- ing in sac.	Do.
22	46	F.	Liverpool Royal In- firmmary, Sept., 1895.	Dr. Mercer, Ditton.	Right femoral.	10 hours.	3 inches of bowel ad- herent to omentum, bloodstained fluid.	Dark purple.	Gimbernat's ligament was nicked; Macewen's radical cure.	Do.
23	58	M.	Liverpool Royal In- firmmary, Sept. 26th, 1895.	Dr. Blackledge, Tuebrook.	Right inguinal.	2 days.	2 loops of about 8 inches each, 1 loop twisted and strangu- lated.	Dark purple.	Macewen's radical cure.	Do.

TWENTY-FIVE CONSECUTIVE CASES OF STRANGULATED HERNIA—Continued.

No.	Age.	Sex.	Where operated, and date.	Doctor's case.	Variety of hernia.	Strangu- lated time.	Contents of sac.	Condi- tion of bowel.	Details of operation.	Result.
24	38	F.	Liverpool Royal Infirmary, Sept. 29th, 1895.	—	Um- bilical.	25 hours.	Large loop of small bowel with omental sac.	Dark purple.	Omentum was dissected away off sac; ligatured vessel by vessel; the sac was ligatured.	Cured.
25	59	M.	Liverpool Royal Infirmary, Oct. 21st, 1895.	Mr. Dudgeon.	Right inguinal through internal ring.	24 hours.	Loop of bowel; large hernia of bladder through back wall of inguinal canal into scrotum, adherent to sac of hernia of bowel.	Dark purple.	Macewen's radical cure on sac of hernia; the bladder was replaced.	Do.

REMARKS.—Case 1: Slight recurrence of the hernia 6 months afterwards. The patient was a chronic bronchitic, and uses a light truss now (1895). Case 2: The notes of this case are mislaid. Case 3: All the symptoms were relieved, and the patient took food. He had an enlarged prostate, cystitis, and incontinence, also ammoniacal urine requiring frequent catheterising. He died on the 6th day from coma (uræmia). The wound was clean. Case 9: Slight recurrence of hernia in April, 1894; controlled by light truss. Case 10: The man was deeply cyanotic from bronchitis. Only a smell of chloroform was given to dull sensation for the skin incision. He was fully awake and talking with us during the remainder of the operation. Case 11: The notes of this case are mislaid. Case 12: 3 weeks after operation suffered from attacks of colic, which yielded to starvation and opium. Case 14: Omental hernia with marked strangulation symptoms. Case 15: Recovered with faecal fistula; 6 months later after failure of attempt to remove the "spur" Murphy's button was used, but the patient died from shock of the operation the same night. Case 15: Patient had feculent vomiting for 24 hours before admission; her pulse could hardly be felt the collapse was so marked, but it was considered advisable to attempt the operation. Case 17: Troublesome bronchitis. Case 18: Although no bowel was found during the operation, there had been absolute constipation and incessant vomiting for the 2 days. Case 20: The wound was left practically open. The patient was so ill from bronchitis that he could not lie down, he was in a semi-sitting position and only partially placed under chloroform. Six months later he died suddenly while out walking. Case 21: Left hernia only strangulated, but the existence of an irreducible lump on the right side necessitated its exploration. Case 22: On the third day there was some distension of the abdomen and tenderness which yielded to saline purge. Case 25: The bladder hernia was as large as a fist and surrounded by a layer of cellular tissue which formed a sac for it and which was ligatured in a bunch after reducing the bladder which had been emptied through a puncture; this puncture was closed by two rows of Lembert sutures.

In the above table 25 cases of strangulated hernia are given:—In Nos. 14 and 18 omentum only was found in the sac. Males: Inguinal right, 8; inguinal left, 3; and umbilical, 1. Females: Femoral left, 7; femoral right 2; inguinal right, 1; inguinal left, 1; and umbilical, 3. The ages of the males were 26, 30, 34, 36, 39, 43, 55, 58, 58, 59, 76, and 76 respectively, and those of the females 30, 38, 45, 46, 50, 52, 52, 53, 58, 61, 64, 69, and 78 respectively. There were two deaths (one directly after operation). The first was from cystitis, nephritis, and coma on the sixth day; he had been troubled with enlarged prostate for years; the bowel symptoms had been entirely relieved and the wound was healthy; this patient was a male aged 76 years (No. 3). The other was from collapse; the patient was in such a desperate condition that allowing her to die unrelieved was thought of; this patient was a female aged 52 years (No. 16). No. 15, a female, died six months afterwards from an attempt to repair a faecal fistula.

was suffering from severe vomiting and pain, there being an irreducible swelling in the right groin and scrotum. On exposing the swelling it was found to consist of two parts: (1) a smaller, evidently escaping through the internal abdominal ring; this was opened and found to contain a knuckle of acutely nipped bowel, which was reduced and the sac treated *à la* Macewen; and (2) a larger, the size of a man's fist, which occupied the scrotum and the lower half of the canal; it evidently contained fluid; this was explored by making a tiny puncture, when out shot ammoniacal urine. It was therefore apparent that a portion of the urinary bladder had herniated. The edges of the puncture were at once clamped, a catheter passed per urethram, and the bladder and this pouch emptied. There was now seen a thin sheet of fibrous tissue stretched over the bladder hernia which was continuous with the back wall of the inguinal canal. It was dissected up and a finger passed between it and the bladder wall into the abdominal cavity and pelvis to separate tissues and prepare a place for it. This portion of bladder had no peritoneum over it and had escaped through the usual place of a direct inguinal hernia, quite three-quarters of an inch to the inner side of the internal abdominal ring. The sides of the puncture were closed by two rows of Lembert sutures, and after some manipulation the portion of bladder returned, the fibrous sac covering which was ligatured flush with the posterior wall of the inguinal canal. The wound supplicated as before mentioned and a slough formed, which was treated by rubbing with pure carbohc acid; after this the case ran an uninterrupted course.

Treatment of cases after operation.—After the first 2 cases morphia (or opium) was not allowed. This drug, although useful for relieving pain, acts directly on the intestinal wall, paralysing it, and thus preventing the bowel acting and relieving itself of flatus and "banked-up" contents. The routine administration of opium appears to rest on the assumption that the loop of bowel after return becomes inflamed. This is of course pure theory. Acting on the idea that if the bowel is fit to return it may be left absolutely to nature unhampered by any "paralyser." I have had no reason to regret it. In only one case (No. 22) did the patient complain of pain, which came on the third day, accompanied by distension and tenderness of the abdomen. This yielded at once to the action of a smart saline purge. Complications that may arise, such as peritonitis, enteritis, and

persistence of strangulation, will be materially masked by opium, which eases pain, prevents diarrhoea and vomiting, and causes distension of the abdomen.

Diet.—For the first twenty-four hours sips of warm water only, ice being prohibited, for patients and nurses say that enough ice cannot be given to quench thirst; this is probably due to the dryness and hardness of the tongue produced by the abstraction of heat to melt the ice. If flatus be not passed by the end of this time the same starvation is indulged in until it does. After the passage of flatus half a pint of beef tea is granted during the next twenty-four hours; then, if all goes well, half a pint of milk is added the next day, increased by half a pint daily until two pints of milk and half a pint of beef-tea are reached, generally by the sixth or seventh day. The patients are kept on this until the bowels act. If by the ninth or tenth day no action of the bowels has taken place a dose of compound liquorice powder is given (sometimes an enema). The diet is now increased by the addition of fish, then beef tea, and, some of the milk being discontinued, chicken and a chop on successive days, and generally, unless any contra-indication, common diet by the end of the second week. The cases that recovered were all kept in bed for six weeks to allow of a firm cicatrix forming. In some of the older patients, particularly when much collapsed, a teaspoonful of brandy in a little warm water was given every hour for the first day, and continued if considered necessary in modified doses.

Results.—One patient died the night of the operation, and Case 16 from collapse. She had a large strangulated umbilical hernia, and was so reduced from faecal vomiting that her pulse was hardly perceptible at the wrist; still, it was not considered right to allow an individual to die with bowel unrelieved. The operation lasted only a few minutes; there was no attempt at radical cure, merely two sutures passed through the skin and sac to close the aperture. Case 3, a man aged seventy-six years, died on the sixth day from coma gradually coming on from kidney mischief. He had enlarged prostate and cystitis with ammoniacal urine, and needed frequent catheterising. The bowel symptoms were all relieved. He was partaking freely of milk. The wound was healthy. With the usual leniency accorded to operators, this death not being counted, we can, I think, fairly place the mortality as 1 out of 25 cases—fortunately a very low figure when it is remembered that 6 were over sixty years of age (3 over

seventy years). I conclude with the belief that the prompt recognition of the condition and early operation, without the old-fashioned savage attempts at taxis (10 of the cases were operated upon within twenty-four hours), had much to do with the low mortality. When the operation is undertaken, rapidity, thorough antiseptic cleansing of the sac contents, no undue delay over so-called radical cure, and judicious starvation without opium can be relied upon to keep the deaths down to a small percentage.

Liverpool.

VENTRO-HYSTEROPEXY.

By J. O'CONNOR, M.A., M.D., B.Ch., T.C. DUB.

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DURING the past twelve months I have performed abdominal fixation of the uterus for prolapse eight times, and I wish to bring more fully under the notice of the profession the ease and certainty with which this operation may be executed, also the advantages of fibro-serous approximation, so ably advocated by Mr. Greig Smith. Quite recently I had an opportunity of realising the danger in anyone attempting to fix the uterus to the anterior parietes without opening the abdominal cavity. I particularly refer to a method of intra-uterine ventro-fixation recommended by Mr. Shober. On opening the peritoneal cavity, the omentum covered anteriorly the lower abdominal viscera in all directions, notwithstanding the fact that my two-inch incision extended to within half an inch of the pubes. If I had attempted to fix the uterus by a needle passed through the womb without opening the peritoneum, I certainly would have included the omentum; therefore with this experience—and I have seen the same in other cases—I have strong objections to working in the dark. In each of the eight cases there has not been the slightest post-operative complication; all united by first intention, in no instance did the temperature exceed 100° F., and no recurrence of the trouble has been reported, and, although I never order an abdominal belt to be worn afterwards, no ventral hernia has occurred. To my mind the latter mishap is due to deficient care in suturing the parietal wound. Of course a short period only has elapsed, therefore these latter observations can only be tentative. In a way I feel thankful that I have not as yet been afforded the opportunity of examining the class of adhesion that takes place, nor have any of my patients, so far as I know, tested the same by becoming pregnant. As some of them are young doubtless the test will be applied.

The operation is carried out as follows: The patient, having been "acclimatised" to hospital life for a fortnight, during which time sundry repairs are undertaken—curetting the endometrium, excision of the cervix, and colpo-perineorrhaphy, the bowels, if necessary, being well cleared out with repeated doses of magnesium sulphate—the day before the operation the pubic hair is shaved off and the skin of the abdomen scrubbed with soda, soap, and hot water, then washed with turpentine, and a large piece of lint soaked in a 1 in 500 solution of corrosive sublimate applied and fixed on for the night by antiseptic wool and a bandage. On the morning of the operation a large soap and water enema is given, and immediately before the patient is brought into the operating-room the urine is drawn off. The patient having been chloroformed the night's dressing is removed and the skin all round the field of operation is again scrubbed with a sponge soaked in turpentine and lastly thoroughly washed with Watson Cheyne's strong solution:—1. An incision two inches in length is made in the median line and extending to within half an inch of the pubes. All bleeding must be stopped before the peritoneum is picked up with a pair of dissecting forceps and opened; a few pressure forceps are attached to the cut edges of the peritoneum—these help greatly in after manipulations. 2. The left index-finger is passed down below the intestines and omentum to the uterus, with palmar surface, hooking the former upwards. With the tip of the finger steadied on the womb I pass down a Muzaux forceps on the dorsal aspect of the finger, seize the uterus, and pull it up to the wound. 3. An assistant now takes hold of the forceps and the presenting surface is scarified with the point of a scalpel; some trifling oozing takes place, which is easily arrested by sponge pressure. 4. At the lower angle of the wound a curved needle threaded with silk is

passed from without inwards through the rectus muscle and transversalis fascia. The peritoneum being retracted by pressure forceps (previously applied) the needle is then passed for at least a quarter of an inch in depth into the uterus and made to emerge about half an inch from the point of entry. The peritoneum on the opposite side is next held back while the needle is passed from within outwards through the transversalis fascia and rectus muscle. In this manner three sutures at intervals of a third of an inch are inserted. Any bleeding from the needle punctures is arrested by sponge pressure. 5. The peritoneum is again held back on each side and these sutures are tied firmly and the ends cut off. (Care must be taken not to tie too tightly lest the silk sutures should cut through the uterus; firm approximation is all that is necessary.) In this manner the serous covering of the uterus is brought into intimate connexion with the transversalis fascia and recti muscles for half an inch in width and one inch in length. 6. Before closing the upper inch of the wound it is desirable to pass a small sponge held by torsion forceps into the peritoneal cavity in order to remove any blood or clot that may be present. The peritoneum is next closed by a continuous fine silk suture. It is well to pass the first stitch through the peritoneum on the side next the operator, then through the uterus, and, lastly, through the peritoneum on the opposite side. In this way the peritoneum is brought into accurate apposition with the serous coat of the uterus and prevents a subsequent site for ventral hernia. The recti muscles in the upper portion of the wound are then brought together by another continuous fine silk suture and the skin wound closed in the same manner. Iodoform gauze is applied. The first dressing is removed on the eighth day and the suture on the twelfth day. The patient is allowed out of bed on the fourteenth day.

There is one essential in the closure of this or any abdominal wound, and that is that no pocket must be left for the accumulation of serum or blood, for where these factors are thither staphylococci and other micro-organisms gather together—nay, more, thrive.

Buenos Ayres.

A CASE OF AXIAL ROTATION OF THE TESTIS.

By ALFRED SHEEN, M.D. ST. AND.,

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A YOUTH aged eighteen years jumped over a hedge after a tennis-ball on July 5th, 1895, but felt no ill-effect at the time. On the 6th at 3 A.M. he awoke with severe pain and swelling in the testicle, it being all right when he went to bed. I saw him on the 9th in consultation, when the testicle was found to be considerably enlarged and somewhat tender. The temperature was normal although it had been up to 103° F. I advised immediate incision into the tunica vaginalis to relieve tension, and this was done at the Private Hospital at Cardiff on the 11th. On operation I found a dark-red mass like blood-clot, but not removable, and the testicle was swollen to the size of a small orange, globular in shape. All antiseptic precautions were carried out. The case pursued an aseptic course, the temperature being normal throughout. The stitches, however, gave way and a hernia of the testis resulted; there was no pain. The dead tissue was dry and was cut away with scissors. There was no sensation, common or testicular. It was obvious that the testicle was useless and it was removed on Aug. 9th; on the 20th the wound was dressed for the first time and the stitches were removed, the parts being nearly healed. The patient got up for a time day by day, was out for the first time on the 28th, and went home to London about the middle of September.

The specimen was sent up to the Clinical Research Association and they returned the following report:—"The specimen is an example of that rare condition described as *torsion of the testis*. The substance of the body of the testicle is healthy in itself; there are no signs of chronic inflammation, syphilis, or tubercle. Section of the epididymis shows an abundant extravasation of blood into its tissue, but there is no other lesion. This hæmorrhagic infiltration is due to twisting of the spermatic cord and