the grafted ovaries may carry on their function for a much longer period.

(3) Except for a little tenderness, and occasionally slight swelling about the time of menstruation, not the slightest inconvenience has been caused by the grafted ovaries in their new location.

The conclusions resulting from the consideration of this case, especially when taken in conjunction with the reports on this subject by other operators,² demonstrate beyond all doubt that autoplasmic transplantation of the ovaries is a most valuable gynaecological procedure, and is a definite step forward in the conservative surgery of these organs. The simplicity of the operation, the ease and rapidity with which it can be done, the absolute assurance of success, if a few simple facts are observed,³ justifies its use beyond all doubt in suitable cases.⁴

I am much indebted to Mr. W. J. Owen, of the Australian Institute of Anatomical Research, Melbourne, for preparing the microscopical sections, and for microphotographs.

REFERENCES.

¹ Crossen's *Operative Gynaecology*, 2nd edition, p. 462, para. 2. ² Blair Bell: *Lancet*, October 30th, 1920; Crossen's *Operative Gynaecology*, 2nd edition, devotes forty pages to this subject. ³ Natrass: *Med. Journ. of Australia*, January 16th, 1915, vol. 1, No. 3. ⁴ Blair Bell: *Lancet*, October 30th, 1920; Natrass: *Med. Journ. of Australia*, December 20th, 1910, vol. xv, No. 12.

A CASE OF PITUITOUS CATARRH.

BY

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CASES of that variety of bronchitis known as "pituitous catarrh," originally described by Laënnec, are exceedingly rare, and for this reason it appears to us of interest to report the following instance. The patient was under the immediate care of one of us (I. J. D.), and on February 9th was seen by us together in consultation.

The patient was a married lady, aged 34; her height was 5 ft. 2½ in., her weight 9 st. Her maternal grandmother had died of bronchitis, but otherwise the family history was unimportant. She was of a cheerful disposition, and had enjoyed fair health, except that since 1919 she had been subject to attacks of bronchitis. These occurred twice in 1919, and once each in 1920 and 1922, and were respectively of six, four, three, and two weeks' duration. In each the sputum was of the peculiar character seen in the present attack (1923), and there can be little doubt that they were also attacks of pituitous catarrh, though the nature of the malady was not recognized at the time.

The present attack commenced with a "cold" at Christmas, 1922. This was followed by bronchial catarrh, with the expectoration of some phlegm of the peculiar character to be shortly described. This lasted for about a week and then improved, but the cough and phlegm did not entirely disappear. In the middle of January, 1923, the bronchial catarrh became worse and she commenced to bring up larger quantities of the peculiar expectoration. There had been hitherto little, if any, pyrexia, and the patient had been getting up, though confined to the house. On February 5th, however, owing to the increasing cough and distress, she took to her bed, where she remained for the following three weeks.

On February 9th, when seen in consultation, her condition was as follows:

She was sitting up in bed, racked by a harassing cough. The lips were faintly cyanosed. Temperature 99.5°; respiration somewhat hurried. She was well nourished; tongue clean; teeth satisfactory; no pyrrhoea. Throat natural.

The chest was a little deeper than natural, but there was no marked emphysema. Heart natural; pulse 90, regular, soft.

Sonoro-sibilant râles were audible all over the lungs, with also some scattered moist sounds. There were no signs pointing to tuberculosis or of consolidation.

The abdomen, nervous system, and urine were natural.

The cough was very troublesome from continual efforts to bring up the sticky expectoration. At intervals of an hour or so a paroxysm would occur, and these attacks, especially at night, were often distressing, a good deal of cough being required to bring up a small quantity of phlegm.

The sputum, which was coughed up as a rule in small amounts at a time, was quite unusual in character, and quickly formed a thick, ropy homogeneous mass in the sputum pot. This was found

to consist of mucus, looking just like unboiled white of egg, as described by Laënnec, and was covered on the surface with a white froth. The mass of mucus was lightly streaked with small plugs, whitish or yellowish-white in colour, composed of muco-pus from the smaller bronchi.

The expectoration was expelled in small quantities at a time, varying from a teaspoonful or two to half an ounce. But later, when improvement set in and some sleep was possible, several ounces were expectorated in a short time, and more than once a mug of 6-ounce capacity was filled in a quarter of an hour. A bout of coughing would last until the sticky mucus was expelled, relief finally coming with the expulsion of one of the small plugs of muco-pus to which we have referred. For a period of a fortnight the average daily amount of sputum was 20 ounces, but on several days a greater amount was brought up, 30 ounces being the largest quantity expectorated in twenty-four hours.

A characteristic feature of the sputum was the ease with which it could be emptied from vessel to vessel, the whole flopping out *en masse*, leaving the sputum pot clean, save for a little froth near the rim. Its tenacious character was also well shown by the fact that if a small portion were seized with a pair of forceps, the whole mass could be pulled as a string from one pot to another.

The patient was kept strictly in bed, a steam-kettle was ordered, and poultices and antiphlogistine to the chest. Since the sputum was so sticky and difficult to bring up, belladonna seemed contra-indicated in spite of the amount of expectoration, and a mixture containing sodium bicarbonate, ammonium carbonate, vinum ipecacuanhae, and syrup of squills was prescribed. Under this treatment the symptoms slowly improved, and the cough and phlegm gradually lessened, but it was three weeks before the patient was able to leave her bed, and four weeks longer before she could leave the house. At no time, we may add, did the temperature reach 100°, though ranging at night between 99° and 100°.

The patient's cure was finally completed by a stay of three weeks at Bournemouth, which she left on April 22nd, free from symptoms, and with her chest quite clear.

Dr. H. A. Scholberg, joint pathologist and bacteriologist to the Royal Infirmary, Cardiff, examined the sputum in more detail, and reported that the bulk of the material was, as its appearance indicated, mucus. He also found that a small quantity of albumin (but no globulin) was present, amounting to roughly just under 0.5 per mille, as measured by the Esbach's tube. The tenacious yellowish-white plugs were found under the microscope to consist of mucus and pus cells (with Gram-positive diplococci), clearly coming, in Dr. Scholberg's opinion, from the bronchioles.

Cultivation of the sputum showed the presence of no unusual organisms, but many colonies of streptococci and of *Micrococcus catarrhalis*, with a few staphylococci, were grown. Tubercle bacilli were not found, nor had they been detected at a previous examination.

Commentary.

In his original description of "pituitous catarrh" Laënnec¹ wrote as follows: "I call that variety of catarrh 'pituitous' which is associated with an expectoration which is colourless, transparent, ropy, frothing on the surface, and which when the foam has been removed resembles white of egg diluted with water."

Defined in this way the case which we have described falls into this type of bronchitis, though in this instance there was but little "dilution" of the "white of egg" appearance. It is a variety which is, in our experience, extremely uncommon, and is one in which the stress of the malady would appear to fall upon the mucous glands of the bronchial tract, leading to very excessive secretion of mucus. In this connexion it may be of interest to add that the lady whose case we have recorded, for many years on first waking in the morning had been obliged to remove an accumulation of sticky mucus from the roof of the mouth, thus indicating possibly a perverse activity on the part of her mucous glands.

But few cases of pituitous catarrh are described in the literature, and it would appear to us from the clinical descriptions that in some of those published confusion has arisen between this variety of bronchitis and acute oedema of the lung, the abundant frothy sputum met with in each case having led to the mistake.

A careful investigation of the sputum should, however, at once distinguish them. In acute oedema of the lung, as we have shown elsewhere,² when the froth has been removed the expectoration will be seen to be yellow or amber colour; in pituitous catarrh it is like white of egg. In the former there is no mucus in solution, or, if present, it occurs in small and varying quantities, depending on the duration of the attack and the admixture of ordinary mucopurulent sputum; in the latter the secretion is chiefly composed of mucus, and thus is much more viscid. Thirdly, and most important, while the former contains so much protein as to become solid on boiling, whence the name "albuminous expectoration," the latter contains only a

trace of albumin. The diagnosis, therefore, should not be difficult, provided the sputum be carefully examined.

REFERENCES.

- ¹ *Traité de l'auscultation médiate et des maladies des poumons et du cœur*, par R. T. H. Laennec, troisième édition, tome i, p. 151, Paris, 1831.
² Albuminous Expectoration following Paracentesis of the Chest, by P. Horton-Smith Hartley. *St. Bartholomew's Hospital Reports*, vol. lxi, 1905, p. 77.

LACERATED KIDNEY DUE TO INDIRECT VIOLENCE.

BY

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THERE are several points of interest in the following case, which will be discussed after the facts have been related.

Mrs. C., aged 53, was first seen on January 1st, 1923. She stated that thirty-six hours previously she had fallen from a chair on which she was standing, and immediately afterwards was seized with abdominal pain. She went to bed, and some time during the night vomiting commenced, and continued up to the time of my seeing her on the morning of the second day after the accident. She then appeared very ill. The pulse was 110 and rather weak, the temperature 100°. There were no signs of external violence. The abdomen was distended and acutely tender in its lower segments, particularly over the right iliac fossa. It exhibited an intense rigidity below the level of the umbilicus; above that level rigidity was not so marked. The liver dullness was not diminished; rectal and vaginal examinations yielded no information. The urine was scanty and high-coloured, but contained no blood. A diagnosis of peritonitis was made, though I was unable to determine its cause.

Operation.

She was removed to hospital, where operation was at once performed. On palpation under the anaesthetic a fixed mass was felt in the right iliac fossa, passing backwards into the right lumbar region and upwards beneath the ribs.

An incision over the right rectus was made, and it was at once seen that there was a considerable quantity of free blood and clot in the abdominal cavity. The mass felt on palpation was found to be a haematoma around the right kidney. This haematoma had tracked downwards along the psoas, had stripped up the peritoneum, and lifted forwards the caecum and ileo-caecal valve; further, it had percolated into the lower part of the mesentery of the small intestine.

To the outer side of the ascending colon there was a small tear in the parietal peritoneum not more than one inch long. Through this blood had evidently made its way into the peritoneal cavity. It was interesting to note that the caecum, appendix, and terminal part of the ileum were deeply ecchymosed, and presented the appearance that they would have shown had they been involved in a recent strangulation. The blood and clots were rapidly cleared out, the rent in the peritoneum sutured, and the abdomen closed.

An incision was now made exposing the right kidney. The haematoma was cleared away, and, on gentle examination of the organ *in situ*, a laceration was felt on the anterior surface of the lower pole extending from the lateral border inwards towards, but not involving, the pelvis. As there was now no bleeding from the laceration its depth was not determined, and I contented myself with packing the cavity resulting from the evacuation of the haematoma and closing the wound as far as practicable around the pack.

After-History: Recovery.

The patient's condition at the end of the operation was grave and continued so for two days, there being much post-operative vomiting. From then on, however, she made good progress. The packing was removed in two or three stages and a drainage tube substituted. Through this urine was discharged in small amount for five weeks. There was never any blood in the urine passed naturally. The patient left hospital at the end of the eighth week.

In the first place, the laceration was caused by indirect violence. In such circumstances the injury to the kidney may arise from acute flexion of the body with corresponding acute flexion of the kidney on its transverse axis (Thomson Walker); or where there is no such flexion but where the accident consists of a fall from a height on to the buttocks, the kidney may be injured by direct impact against the twelfth rib or transverse process of the first lumbar vertebra (Tuffier). In the case under consideration I think the laceration was produced by the first mechanism, for the distance from the seat of an ordinary chair to the ground would hardly be sufficient to cause it by the second method.

Secondly, though lacerations of the kidney usually radiate outwards from the hilum, in this instance the laceration was produced in the cortex only, and, though small, had given rise to much haemorrhage.

Thirdly, there was no haematuria so far as I was able to observe. There may, of course, have been blood in the urine when the patient, who was by no means an intelligent type, was not in a condition to notice it. On the other hand, since the laceration was in the cortex only, there may have been none at any time.

Fourthly, although the laceration was caused by indirect violence the peritoneum was torn and there was accompanying haemoperitoneum.

There is no doubt that haemorrhage had already ceased at the time of operation, but it is highly probable that but for the treatment adopted urine would sooner or later have found its way into the peritoneal cavity, with fatal results.

I employed treatment by packing, rather than suture of the laceration, in order to save valuable time. In this connexion it is interesting to note that Albarran has collected six cases in which packing was resorted to; all recovered (Thomson Walker).

Memoranda:

MEDICAL, SURGICAL, OBSTETRICAL.

LACTIC ACID IN THE TREATMENT OF CHRONIC ENTERITIS.

A NUMBER of cases of chronic enteritis are associated with excessive fermentation of the intestinal content. The condition frequently arises *de novo*, although in a certain proportion of cases it follows an acute stage.

It occurs in babies as a result of the food becoming contaminated by micro-organisms. The motions are frequently loose, green, and malodorous. This is usually associated with abdominal distension, excessive flatus, and attacks of screaming due to colic. There is nothing palpable abdominally. In adults the following syndrome is present:

(1) Colic of either the small or large intestine. The pain is variable in intensity, and usually moves from one part to another. In the small intestine it is usually referred to the region of the umbilicus. The large intestine may be definitely palpable and tender to touch. I have seen one case where the caecum was palpable.

(2) The stools vary in consistency and colour. There may be looseness alternating with normally formed motions or constipation. The stools may be paler than usual, or even greenish. They are frequently offensive, and are likely to be associated with excessive flatus.

(3) There may be an associated gastric dyspepsia. Where the condition has lasted some time mental depression, loss of weight, anaemia, and headache may occur as a result of toxic absorption.

Cases of the types referred to respond very well to lactic acid. The rationale of the treatment lies in the fact that *B. coli*, which is as a rule unusually active in those cases where the motions are unduly offensive, cannot grow in a concentration of lactic acid of more than 1 per cent.¹ The treatment is a result of Metchnikoff's teaching, and given in this way is a satisfactory alternative to curdled milk preparations. The latter cannot always be tolerated by patients,² and involves a certain amount of difficulty where there is not the proper convenience for making bacterial preparations.

The following prescription is useful for adults:

R	Ac. lact.	...	...	...	...	...	3ij
	Syr. aurant.	...	...	...	...	...	3j
	Aq.	...	...	...	...	...	ad 3viij

Sig.: 3ss t.d.s. p.c.

Where there is gastric dyspepsia the following may be substituted:

R	Ac. lact.	...	...	...	...	...	3ij
	Liq. strych.	...	...	...	...	...	mxx
	Tr. card. co.	...	...	...	...	...	3j
	Aq.	...	...	...	...	...	ad 3viij

Sig.: 3ss t.d.s. p.c.

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¹ *Archives of the Middlesex Hospital*, 1916.

² Herschell: *BRITISH MEDICAL JOURNAL*, 1910, i, p. 21.