under normal tension the epithelium may grow over the opposing surfaces and so form a cyst. This work was confirmed by Uihlein (1939), and all subsequent writers on the subject have emphasized the necessity of suturing the graft under as great a tension as possible—in contradiction of all the accepted rules for hernia repair. It is obvious, however, that this is a factor which cannot be controlled with complete certainty, and Strahan concluded that, in spite of the most careful technique, any surgeon doing a large number of these operations will inevitably meet some cases of cyst formation. Whilst this does not condemn the method, it must temper enthusiasm for it.

The present case is of interest for the large size of the cyst, requiring operative removal although the hernia itself had not recurred, and for the long interval of seven years between the implanting of the graft and the appearance of the cyst.

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Medical Memoranda

Caeco-colic Intussusception Complicating Perforated Appendicitis

The association of caeco-colic intussusception with acute appendicitis seems to be rare, only one case having been found in the literature.

CASE REPORT

A boy aged 22 months was admitted to hospital on January 24, 1954, with a history that 48 hours previously he had had abdominal pain and had vomited once. After a few hours the pain went away, but it recurred 24 hours later, and there had been periods of screaming with evident abdominal pain and pulling up of the legs, and usually a vomit. The attacks lasted for 5–15 minutes and occurred every hour or so. Between the attacks he was quiet, and in the few hours before admission became rather drowsy and disinterested. He had been taking fluids fairly well between the attacks.

Examination showed a flushed and toxic-looking little boy. His pulse was 160 and temperature 101°F . (38.3°C). The tongue was coated, but there was no evidence of dehydration. The abdomen showed generalized rigidity, maximal on the right side, where there was extreme tenderness. Rectal examination revealed a "bogginess" in the recto-vesical pouch but no blood. The chest and C.V.S. showed nothing abnormal. A diagnosis of peritonitis from appendicitis was made, although the recent history suggested an intussusception.

Operation.—Under anaesthesia a rather bulky, sausage-shaped mass was felt just to the right of and above the umbilicus. On laparotomy through a right paramedian incision a diffusing peritonitis was found and an amount of thin pus with small fibrin flakes was sucked out. The small gut was only slightly distended. The apex of the intussusception had reached the right transverse colon; it was pushed back and easily reduced. The apex was caecal, at the level of the appendicular base, which could not be seen, as the proximal half of the appendix was retroperitoneal. This part of the caecum was thickened and congested and the appearances extended back along 4 in. (10 cm.) of ileum, the mesentery of which was rather bruised. The distal $1\frac{1}{2}$ in. (3.8 cm.) of the appendix, which was visible, was congested correspondingly, and it was obvious that all this gut was

fully viable. Over the area of the appendicular base was a small yellow patch, and on following the appendix back to its base by opening the peritoneum a small abscess surrounding a gangrenous perforated segment was revealed. The base was just clear, and appendicectomy was carried out. A small drain was inserted down to the area and the abdomen was closed.

Post-operatively the patient took fluids orally and was given penicillin and streptomycin by intramuscular injection, and after a slow first 24 hours he made a rapid and completely uneventful recovery. He was discharged twelve days later.

COMMENT

The clinical picture was interesting in that the recent history suggested intussusception, whereas the examination suggested peritonitis from appendicitis. The clear viability of all tissue except the perforated gangrenous segment of the appendix confirms that the appendicitis preceded the intussusception. It obviously must have done, otherwise there would have been no peritonitis. The presence of a localized abscess on the caecal wall initiated the intussusception.

It was remarkable how innocent the visible portion of the appendix looked, and this case may serve to emphasize that the appendix should be closely examined, especially where the apex of an intussusception is caecal. A small caecal abscess as an initiating mechanism was noted by Gavin Cleland (1953), but under different circumstances—following appendicectomy with invagination of the stump. Lipin and Miller (1948) reported a case of acute appendicitis complicated by intussusception in a man aged 21.

I wish to thank Mr. John Talbot for the opportunity of dealing with this case.

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Recovery after Penetrating Wound of the Heart

Contrary to the accepted belief of the popular fiction writer, injury to the heart by a penetrating wound of the chest may occur without an inevitably fatal result. The following is a report of a case which came under my care.

CASE REPORT

On April 2, 1953, at about 10.30 p.m., a man of 22 was brought into the General Hospital, Ashton-under-Lyne, following a knife injury sustained during a brawl. He was extremely shocked and suffering from extensive blood loss. His clothing was heavily bloodstained and small cuts were present in his overcoat, jacket, and shirt in the left pre-cordial region. He was semiconscious and irritable, and needed considerable restraint to prevent him falling from the stretcher. Respiration was deep and sighing, there was extreme pallor of the lips, face, and hands; sweating was profuse, and no pulse was discernible at the wrist or in the neck.

After a slow blood transfusion the blood pressure rose to 56 mm. Hg, and it was decided to remove his clothing and examine his chest. There was a vertical incised wound in the fifth left intercostal space, about 1 in. (2.5 cm.) in length and 1 in. lateral to the mid-clavicular line. The wound was not now bleeding. Percussion revealed a stony dullness over the left half of the chest, with considerable mediastinal shift to the right. On auscultation no breath sounds could be heard on the left side of the thorax. A diagnosis of haemothorax was made, probably with injury to the left lung. When the systolic blood pressure had risen to 110 mm. Hg preparations were made for an emergency thoracotomy. However, on arrival at the theatre the blood pressure had fallen to 45 mm. and further resuscitation and transfusion were necessary before the operation could be started.

An incision was made along the line of the fifth rib and costal cartilage, from the mid-sternal to the mid-axillary line. On exposure of the rib, it was seen that the fifth costal cartilage had been severed close to the costo-chondral junction and the parietal pleura was open for about $1\frac{1}{2}$ in. (4.4 cm.) vertically. The rib and cartilage were excised subperiosteally from sternum to posterior axillary line, and the bed of the rib was incised medially and laterally from the edges of the original wound. After spreading the other ribs to open the wound, it could be seen that the left side of the thorax was occupied by a large quantity of blood clot, obscuring the viscera completely. About 3 pints (1.7 litres) of clot and blood-stained fluid were removed. No evidence of injury to the lung could be found; but a blood clot was protruding through a wound in the pericardium about $1\frac{1}{2}$ in. (3.8 cm.) long on the anterior aspect close to the left border. The opening was enlarged to form an L-shaped flap, which was turned back, and the clots were removed from the pericardial cavity. This rendered the heart visible, and it was seen that $\frac{1}{2}$ in. (1.3 cm.) lateral to the anterior coronary vessels, towards the left border of the heart, there was an incised wound lying in the length of its fibres and about $1\frac{1}{2}$ in. (3 cm.) long. No blood was issuing from this wound and no attempt was made to separate the wound edges, which had adhered to each other. Five interrupted sutures of size 0 chromic catgut were inserted deeply, using each suture as a stay whilst inserting the next stitch, before cutting the ends. As much of the remaining clot as possible was removed from the pericardial space and the pericardium was closed loosely with 00 chromic gut. After further careful inspection the thorax was closed in layers without drainage, the left lung being inflated by the anaesthetist. The patient was then returned to the ward, and at that time his systolic blood pressure was 96 mm.

The following evening the mediastinum had deviated to the right and respiration was becoming laboured. There was dullness at the left base and both lungs were moist to auscultation. Aspiration of the left side of the chest yielded 10 oz. (280 ml.) of heavily blood-stained fluid. A similar aspiration after a further 24 hours yielded 12 oz. (340 ml.) of fluid, not so heavily blood-stained. No further aspirations were necessary, but an attempt was made to regulate the transfusion so that the blood pressure remained at about 100 mm.

The patient made an uneventful recovery and was discharged from hospital four weeks after admission. When seen six weeks later his only complaint was pain at the left base on coughing. There was no dyspnoea on moderate exertion.

I wish to thank Mr. P. W. Bleasdale for permission to publish this case; also the anaesthetist, without whom the operation would have been impossible. Last, but by no means least, I thank the nursing staff and laboratory technicians of the hospital.

R. W. LAWRIE, M.R.C.S.

A Case of Acute Nephritis in Pregnancy

Acute nephritis occurring during pregnancy is said to be rare. O'Dwyer and Montgomery (1954) reported three cases, and state that a search of the literature yielded only a further 23 cases. They suggest that with conservative treatment the course of acute nephritis is not adversely affected by pregnancy.

The following case of acute nephritis occurring in the fourth month of a second pregnancy is reported. The pregnancy resulted in normal delivery at term and apparent recovery of the mother. This was followed two years later by a third successful and normal pregnancy and delivery.

CASE REPORT

A 2-gravida aged 31 was first seen at the antenatal clinic on August 28, 1951, when three months pregnant. Her first pregnancy in 1945 had been normal. Her general condition was satisfactory. The urine contained no albumin,

the blood pressure was 130/70, and the haemoglobin 84% (12.5 g.). She attended again on September 11, when her general health remained satisfactory, the urine contained no albumin, the blood pressure was 120/70, and she had gained 1 lb. (0.45 kg.) in weight. There was no oedema present at either attendance.

On September 15 she developed a sore throat which lasted for three days, but did not seek medical advice until a week later, when she first noticed the dark red colour of her urine. On September 27, after three days of complete rest in bed at home, she was admitted to hospital on account of the rapid appearance of considerable oedema.

On examination on admission she looked ill, her face was pale and distinctly puffy, and there was considerable pitting oedema of the abdominal wall, sacrum, and legs. She was in no pain. The throat appeared normal. Her temperature, heart, and lungs were normal. The pulse rate was 80-84 a minute. The blood pressure was 144/92. There was no tenderness in the abdomen or renal angles and micturition was painless. The uterus corresponded to an 18-weeks pregnancy. The urine was a smoky red, boiled nearly solid, and a catheter specimen showed a heavy deposit of albumin, 6 pus cells per 1/6 field, many red blood cells, and a few epithelial cells. No casts were reported but much amorphous debris. Culture gave a scanty growth of *Bact. coli*. A throat swab showed no β haemolytic streptococci. In the first 24 hours 55 oz. (1.6 litres) of urine was passed and the albumin present measured 2 g. per litre (Esbach).

Treatment at the outset comprised absolute rest in bed and restriction of fluids and salt. Milk, fruit drinks, and glucose were allowed, and added vitamins. During the first 14 days in hospital the urinary output remained satisfactory; the oedema slowly lessened and disappeared. The urine remained, however, smoky red, and on October 10 the albumin measured 6 g. per litre (Esbach). The haemoglobin was 54% (8.5 g.). The retinae were normal and the patient looked and felt better. The blood pressure varied from 140/88 to 148/92. During the next ten days the urine became normal in colour, the albuminuria diminished to 2.5 g. per litre (Esbach), and the blood pressure fell to 130/80. Oral iron was given and the protein in the diet was rapidly increased. She was discharged home to rest in bed on October 22. She was readmitted twice for a few days in November and again in January for reassessment.

On November 8 albuminuria was 1.5 g. per litre (Esbach) and the blood pressure 112/70, and on January 2, 1952, a catheter specimen of urine showed a faint trace of protein, and the deposit an occasional leucocyte and red cell with some epithelial cells and debris. Cultures showed no significant growth. The pregnancy proceeded normally. The blood pressure was 124/82 and haemoglobin 80%. The patient continued resting, mostly in bed, at home, on a normal diet with added vitamins and iron.

On February 26 she was normally delivered, in hospital, of a healthy 8 lb. 3 oz. (3.7 kg.) infant. The placenta appeared to be normal. At post-natal examination on April 16 she looked well, her blood pressure was 116/90, and an ordinary specimen of urine showed a faint trace of albumin.

Two years later, on March 3, 1954, after a normal pregnancy, she was normally delivered of her third child, a healthy infant weighing 8 lb. 10 oz. (3.9 kg.). Her blood pressure remained normal and was 120/70 at the sixth month, 10 days before delivery, and in the puerperium. The urine remained protein-free throughout. There was no oedema present before delivery. Post-natal examination six weeks later was normal.

I gratefully acknowledge the help given by Mr. William T. Kenny. I also thank Dr. John M. Malins, who kindly saw this case and confirmed the diagnosis of acute nephritis.

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