6. Occasionally a patient presents himself with frank D.A.H. type of symptoms, and on examination mitral stenosis is found.

7. Symptoms may vary because of some external factor—physical or physiological. A patient was markedly affected at the fairly high altitude at Nairobi, but was very much improved on returning to sea-level.

SUMMARY

An analysis of 300 cases of mitral stenosis, without gross cardiac failure, has been attempted. It is realized that the comparatively small number of cases may give rise to misleading conclusions, but it is felt that the following are justified.

1. The age and sex incidence has been emphasized. There is evidence that the disease is commoner in women than men in the proportion of 3:1, and that it occurs at a definitely earlier age in males.

2. The importance of rheumatism as an aetiological factor has been shown. At the most *conservative estimate* it was the aetiological factor in 80 per cent. of the cases. It is probable that 90 per cent. is nearer the correct figure in the present series. No other aetiological factor was found present with any degree of constancy.

3. Some of the complications of mitral stenosis and their relative frequency at an out-patient clinic are mentioned.

4. The type of symptoms and their mode of onset, as found in the survey of the present series, are considered. The majority of cases over 45 years of age develop auricular fibrillation.

I wish to acknowledge my gratitude to Professor John Hay and Dr. H. Wallace Jones for their advice and guidance, and for access to the records of their cases at the heart department of the Liverpool Royal Infirmary.

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ACUTE APPENDICITIS: SOME MISTAKEN DIAGNOSES

BY

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It is probable that in no other disease is a wrong diagnosis made more often than in acute appendicitis. Anyone used to operating upon the acutely inflamed appendix to any great extent will probably at some time (or times) have found, on opening the abdomen, one of the following: (1) a perforated peptic ulcer; (2) an inflamed Meckel's diverticulum; (3) a ruptured ectopic pregnancy; (4) a torsion or inflammation of the uterine adnexa; (5) a torsion of a pelvic tumour, cyst, or fibroid; (6) an inflamed gall-bladder; (7) an ileo-caecal adenitis; (8) a hyperplastic tuberculosis of the caecum or even a new growth; (9) a renal or ureteric calculus, or the so-called Dietl's crisis. The case is not unknown where the anaesthetist gets blamed for a severe post-anaesthetic pneumonia, but often before operation the temperature was higher than is usual with an abdominal complaint, and yet a causative lesion of the appendix was woefully lacking. Surely many of these, if one will but admit it, are mistaken diagnoses? If, however, the chest has been carefully examined and found clear there is no disgrace in operating, for the alternative of a ruptured appendix is serious; the only disgrace is when the chest is not examined.

The following notes of four personal cases seem worthy of mentioning on account of their rarity. Each was carefully examined, a firm diagnosis of acute appendicitis was made, and in each the diagnosis was badly wrong.

CASE I

Mary B., aged 5. There was a two days' history of upper abdominal pain, which after eight hours had settled in the right iliac fossa. On admission to the Children's Hospital she had an area of maximum tenderness over McBurney's point. The right lower quadrant of the abdomen was rigid. There was a tender mass felt per rectum, the temperature was 99.5° F., and the pulse 118. She had a coated tongue and had vomited four times. A confident diagnosis of acute obstructed appendicitis was made. On opening the abdomen the appendix was seen to be normal, and there were no glands. The caecum was filled by a large cyst the size of an orange, which practically filled the former, and certainly was tending to obstruct the ileo-caecal valve. On being opened the cyst was seen to be lined with pink columnar epithelium—it was, in fact, bowel mucosa without the folds—and to contain glairy mucus. It was clearly a case of a submucous cyst, and probably was one of the enterogenous cysts derived from buds of epithelium which, separated from the primitive foetal gut, became vacuolated and cyst-like. These cysts may lie in the mesentery near its root or near the gut. If in the gut wall they may be subserous, intramuscular, or submucous (see Fig. 1). The case in question proved to be

FIG. 1.—To illustrate submucous enterogenous cyst.

one of the latter—that is, a congenital submucous enterogenous cyst. Though not unique, it is one of the rare conditions found in this region.

CASE II

The patient, a little girl 12 years of age, was admitted in the late afternoon with a history of having been taken ill two and a half days previously with generalized abdominal pain, followed some hours later by vomiting, and, for the last twenty-four hours, pain in the right iliac fossa. On examination her pulse rate was 120 and temperature 97°. The tongue was coated and the breath foul. The abdomen was tender all over—especially over the appendix—and resistant over McBurney's point. The chest and heart were normal. A rectal examination revealed a tender mass in the caecal region. She thought she felt more comfortable since the morning, and that this change had come on fairly rapidly. Her appearance, however, did not support this. The only item of interest was that she thought her left foot and right wrist had swollen during the last day or two, but there was nothing gross to be seen in them. Her urine was normal. The diagnosis of acute gangrenous appendicitis was made, and I was rather inclined to think that it had perforated, considering the fact that she had become very much easier, that her pulse had risen, and that the temperature had fallen. The

condition of her tongue also supported this impression. The abdomen felt very resistant but not rigid. At operation there was a large quantity of blood-stained fluid. The last two feet of the ileum were a brilliant scarlet colour, and showed numerous small black areas of haemorrhage. The gut wall was markedly thickened, owing to the blood in the tissues, and this explained the mass felt per rectum. The haemorrhage stopped abruptly at the ileo-caecal valve, leaving the caecum almost normal. The appendix, apparently normal, was removed, and was found to contain masses of thread-worms. The rest of the ileum was mottled, the mottling gradually decreasing towards the jejunum. The other abdominal viscera failed to reveal any further relevant pathology. Recovery was complete and convalescence normal, except for the following incidents. For three to four days after operation the motions were mixed with dark blood, and on the third day the urine was similarly discoloured. The post-anaesthetic vomitus contained blood. On about the tenth day she had a severe attack of epistaxis, and about the same time a marked purpuric rash appeared, involving both feet and the outer sides of the ankles. This was so severe that the feet were almost blue. There was also considerable swelling of the ankles.

Blood examination after operation was as follows. Blood film: marked preponderance of mononuclear cells. Differential count: mononuclears 35 per cent., large lymphocytes 22 per cent., small lymphocytes 8 per cent., polymorphonuclear leucocytes 35 per cent.; coagulation time 5 minutes; blood platelets, 114,000 per c.mm.; red blood cells, 5,500,000; white blood cells, 16,500.

It is interesting to note that, although the case was a definite example of purpura, the internal signs appeared long before the surface rash, and although the girl was operated upon when the disease was at its height haemorrhage at this time was not greater than usual. The scar showed some keloid formation. There are many examples such as this in the literature, but usually some petechial spots are present to help. If *Pulex irritans* can be excluded—difficult in the hospital patient—such a rash should raise suspicions.

CASE III

The patient was an unmarried girl, aged 23. While out for a walk in a wood she had tripped and fallen prostrate. She excoriated the left breast and was "winded," but was able to continue home. The journey took some forty-five minutes, and involved climbing a wall. It was in the late afternoon when she arrived, and as she did not want food she went straight to bed and slept the night through. In the morning she awoke with generalized abdominal pain, most marked in the right iliac fossa. Breakfast and midday dinner were refused, and when her doctor was called in in the afternoon he

FIG. 2.—Actual photograph of ruptured spleen. Coin shows how greatly the spleen has become engorged with blood.

found her in bed with a temperature of 100.5° F., a pulse of 120, and a tender resistant abdomen. Rectal examination showed a tumour and tenderness high up in the right side. On arrival at hospital the diagnosis of appendicitis was confirmed with the possibility of a perforated peptic ulcer. At operation she was found to have a ruptured spleen, which was almost severed in two (see Fig 2). She was very ill for a few days, but ultimately made a complete recovery. The interesting points are the mild accident, the amount of exercise she was able to perform afterwards, and the latent period—now so well recognized—before a ruptured spleen was diagnosed. Section of the spleen showed a normal splenic pulp well saturated in blood.

CASE IV

The patient was a man, aged 55, who had had intermittent ill-health for some years, and who, as a result of a blood pressure of over 200 mm., had retired from active work. For vague urinary discomfort he had been cystoscoped three months previously; the result of the examination was entirely negative for any urinary disorder. When seen by me he was acutely ill—tender and rigid over McBurney's point,

tender per rectum, with a pulse of 110 and a temperature of 101° F. He had vomited twice, and had been ill one and a half days when I saw him. The onset had been characterized by mild abdominal colic, umbilical in distribution. This had gradually increased in severity, and had appeared to fall down to the right side. Physical examination revealed nothing else abnormal. His urine was clear. He was operated upon after the firm diagnosis of acute appendicitis. At operation I found the appendix normal, as also was the terminal ileum and caecum. Medial to the ascending colon, however, and overlying the kidney there was a hard mass. At first it appeared to be a calculus in the pelvis of the kidney, but it soon separated with the colon. I then discovered that it was a faecalith in a gangrenous diverticulum projecting like a finger from the medial wall of the ascending colon (Fig. 3). It was enclosed in a mass of the omentum, which in pursuit of its constabulary duties had come over to surround it. I removed the sac and infolded the friable tissues as well as possible. After a delay of four weeks due to a temporary faecal fistula the patient was able to leave the nursing home. A bismuth enema taken since showed nothing abnormal. The case is interesting in that the site of the diverticulum was unusual. This also explains the previous urinary history.

FIG. 3.—Note diverticulum of ascending colon overlying kidney.

The above cases, although in no way unique, represent some of the rarer conditions which one may mistake for an acute appendicitis. Such cases have a humbling but stimulating effect, and make one feel that it is very true about the appendix that if one "wants never to be wrong one must never make it a diagnosis."

I am indebted to Dr. R. W. M. Strain for Figs. 1 and 3.

POSTERIOR POSITION OF THE OCCIPUT IN LABOUR

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The posterior position of the occiput occurs frequently in labour. It is not necessarily a serious complication, nor is it one difficult to deal with. It is, however, often followed by grave consequences to mother and child; of these the most common are maternal trauma from ill-advised or unskilled attempts at delivery, a septic puerperium from frequent examinations and manipulations, and injury or even death of the foetus from trauma or asphyxia. Authors differ as to the frequency of occipito-posterior positions, their estimates ranging from 10 to 40 per cent. of all births. This discrepancy in figures results from failure to make a diagnosis early in labour, and from counting only those in which birth takes place with the occiput behind. A large number rotate forward spontaneously, and unless closely observant the attendant fails to note the original position.

DIAGNOSIS

Recognition of occipito-posterior positions is not difficult if use is made of the diagnostic means available—palpation, auscultation, and examination per vaginam. On palpation the limbs are felt lying in front; and if the