cells still containing air. Later, intercellular septa are destroyed by rarefying osteitis, and eventually complete disorganization of the whole cell system is brought about. In a well-pneumatized mastoid process the cortex is thin; at any time it may be eroded, giving rise in the one direction to intracranial, in the other to extramastoid, complications. The Eustachian tube shows slight inflammatory changes in its osseous part. Its cartilaginous portion is free, with a patent lumen.

PROGNOSIS

Figures dealing with the incidence of complications and the mortality rate indicate a very unfavourable prognosis as to spontaneous recovery from mucosus otitis. Owing to the mild preliminary symptoms there is a tendency to delay surgical measures until considerable destruction of the mastoid cells has occurred, with or without other complications. The average pre-operative history extends to eight weeks, as compared with three to four weeks in streptococcal infections, but early diagnosis and early and thorough surgical measures should forestall further complications and provide better results. In any case, if mastoiditis is present a guarded prognosis is inevitable, since the smallest focus of disease that is overlooked may, even after long periods of quiescence, initiate a cycle similar in effect to that of the original otitis. All available records suggest that recovery from deafness and tinnitus is a more stubborn affair than in otitis due to streptococcal infection, because of the tendency towards organization and fibrosis.

TREATMENT

The nature of the treatment depends on the degree to which the disease has progressed. If seen at an early stage, and the condition is confirmed by bacteriological findings, an immediate myringotomy is indicated provided that a spontaneous perforation has not yet occurred. Thereafter a careful watch on the patient must be maintained, and in order to keep the case under regular observation the nature of the disease should be explained to the patient and to the practitioner. This precaution is necessary because, owing to the absence of pain and malaise, there may be some difficulty in following up the case. In the latent stage, if in five or six weeks' time the deafness, tinnitus, and infiltration of the drum have not improved, mastoidectomy should be carried out even in the absence of definite signs of mastoiditis. This intervention is justified because 80 per cent. of cases develop mastoiditis, and delay is fraught with the risk of intracranial complications. It should be emphasized that radiography is a valuable aid to diagnosis; if really good pictures are obtained the operative responsibility is considerably lessened. Later still, when signs of mastoiditis are definitely present, such as tenderness and sagging of the postero-superior deep meatal wall, mastoidectomy should be performed without delay, particular care being exercised in the removal of all the diseased groups of cells.

SUMMARY

1. Available statistics indicate that otitis media due to *Pneumococcus mucosus* is accompanied by a higher mortality rate and greater incidence of complications than other middle-ear infections.
2. This is due in part to a mild initial clinical course which is often of such slight embarrassment to the patient that he may not seek advice, and in part to the fact that a severe destruction of the mastoid process may occur without clinical signs of mastoiditis.
3. An early bacteriological diagnosis by the method described is simple in achievement and essential for control.

4. Early operation with a thorough evacuation of the diseased mastoid cells is imperative.

In conclusion, I must express my appreciation to Mr. Vlasto and Mr. Hamblen Thomas for their kindness in allowing me to use the material in their clinics; to Mr. Vlasto also for his valuable help and criticism; and to Dr. Post for the radiographic examinations.

BIBLIOGRAPHY

- Abrahams and Zelly: *Ann. Otol., Rhinol., and Laryngol.*, 1925, xxxiv.
 Albert: *Arch. Ohrenheilk.*, 1911, lxxxv, 251.
 Alberti: *Ibid.*, 1913, xcii, 111.
 Barwich and Haardt: *Zeit. f. Hals-, Nasen-, u. Ohrenheilk.*, 1926, xvi, 325.
 Denker: *Zeit. Ohrenheilk.*, 1907, liv, 200.
 Eckert-Mobius: *Arch. Ohrenheilk.*, 1927, cxvi, 270.
 Evers: *Ibid.*, 1923, cx, 169.
 Hesse: *Zeit. f. Hals-, Nasen-, u. Ohrenheilk.*, 1928, xxii. (Further literature see there.)
 Honda: *Beitr. z. Anat., Physiol., Path., u. Therap. d. Ohres*, 1910, iii, 64.
 Kummel: *Deut. Otol. Ges.*, 1907.
 Mark: *Zeit. Ohrenheilk.*, 1908, lvi, 229.
 Neumann and Ruttin: *Arch. Ohrenheilk.*, 1909, lxxix, 1.
 Stutz: *Beitr. z. Anat., Physiol., Path., u. Therap. d. Ohres*, 1923, vii, 100.
 Supfle: *Zentralbl. f. Bakt. u. Parasit. u. Infekt.*, 1906, xlii.
 Wirth: *Ibid.*, 1926, xcvi.
 Wittmaack: *Deut. med. Woch.*, 1906, 1271.
 Idem: *Zeit. Ohrenheilk.*, 1907, liv, 202.
 Zemmann: *Arch. Ohrenheilk.*, 1913, xcii, 74.

PSEUDO-CYST OF THE PANCREAS

BY

D. J. HARRIES, D.Sc., M.D., F.R.C.S.

SURGEON, CARDIFF ROYAL INFIRMARY

In 1892 Mr. Jordan Lloyd published a paper on the pathology of pseudo-cysts of the pancreas, in which he showed that these cysts are really collections of fluid in the small sac of the peritoneum, and therefore have no proper cyst wall apart from the peritoneum lining this sac. A history of injury or of an attack of acute pancreatitis is generally given in these cases. In the case described below no such history could be obtained, in spite of the fact that there was free communication between the sac and the pancreatic duct or one of its branches. When drained these cysts generally undergo complete obliteration in a few months, but sometimes the sinus persists for years. In such cases the operation described below should be given a trial, especially as the difficulties are few, and, if successful, it will relieve the patient of the discomfort arising out of the condition of the skin round the sinus.

A man, aged 57, was admitted into the Cardiff Royal Infirmary on June 22nd, 1932, complaining of loss of appetite, abdominal discomfort after food, and loss of weight. He had lost about 30 lb. since the commencement of his illness eighteen months previously. There was no history of vomiting.

On examination a large swelling could be seen and felt occupying the upper abdomen. The patient knew of the tumour, and he had a strong suspicion that it was some form of cancer. The swelling was tense, but it showed definite fluctuation.

On June 25th the abdomen was opened through a right paramedian incision, and on investigation the cyst was found to be in the lesser sac of the peritoneum, with the stomach running across its anterior surface well below the middle. The cyst was opened through a small incision in the gastro-hepatic omentum. There was no definite cyst wall apart from the peritoneum lining the lesser sac. A drainage tube was stitched in the cyst and brought out through the upper end of the incision. A few sutures were inserted near the tube, anchoring the small omentum to the parietal peritoneum. The drainage tube was removed in about a fortnight, but the sinus continued discharging thin clear fluid containing pancreatic ferments, which irritated the surrounding skin. Examination of this fluid on June 25th and August 12th showed a diastatic index of 4,000 and 6,600 units.

Attempts were made to obliterate the cyst by injecting sclerosing fluid down the sinus, but the only result was to

interfere with free drainage from the cyst, which started refilling, until the sinus had been dilated.

The patient was discharged on August 31st, as he was getting tired of being in hospital. He attended regularly for dressing until November 2nd, when he was readmitted. The discharge had not diminished, and the skin round the sinus was still excoriated.

On November 19th it was decided to attempt an anastomosis between the sinus and the duodenum or stomach. To avoid injuring the sinus wall a rubber catheter was inserted into the sinus before making the abdominal incision. The abdomen was opened through the original incision, below the sinus, and the upper abdomen carefully examined. The small omentum was found to be adherent to the parietal peritoneum over an area two inches in diameter, with the sinus at its centre. The abdominal incision was now extended upwards so as to surround the sinus and not disturb the adhesions between the omentum and parietal peritoneum. (Fig. 1.)

FIG. 1.

FIG. 2.

The original intention was to preserve the portion of the sinus in the abdominal wall, and use it for the anastomosis in much the same way as the ureter is used in the implantation operation. But it was seen that an ordinary anastomosis could be carried out between the pyloric antrum and the sinus if the latter were cut off at the point where it came through the circle of parietal peritoneum adherent to the gastro-hepatic omentum. The actual anastomosis presented no difficulties, as the mouth of the sinus was now only half an inch away from the stomach. Two layers of sutures were used, in exactly the same way as in a gastro-jejunostomy. (Fig. 2.)

In spite of the condition of the skin of the abdomen at the time of operation, everything healed by first intention. On December 17th the patient left hospital, with no leakage of fluid and with a healthy abdominal wall. He has been seen twice since, and is enjoying perfect health.

Memoranda

MEDICAL, SURGICAL, OBSTETRICAL

SPONTANEOUS ACUTE MYXOEDEMA

The case of spontaneous acute myxoedema reported in the *Journal* of December 24th, 1932, by Drs. Watney and Douthwaite reminded me so vividly of one I encountered in October, 1928, that I looked up my notes.

The patient, a lady of 55, in perfect health, went for a ten days' holiday to Scotland at the end of August, 1928. She came home feeling "tired," and became more and more so during September and the beginning of October. About October 15th she "felt very ill," had no energy, was "blown out," "short of breath," "stiff," and had lost her power of hand-grip, so that things were constantly falling from her hands.

I saw her on October 17th, 1928. In addition to the above symptoms she complained of pain behind the middle of the

sternum, weakness, and a feeling of having quickly "aged prematurely." She had noticed her "face was swollen." Her face was puffy and pale; her hair was "brittle," and was getting thin; her skin dry, her voice toneless and "creaky." She had large supraclavicular masses of fatty tissue; her hands were "fat," and so was the outline of her lower jaw. She had become thick and coarse-looking, whereas she had usually been trim and dainty. All this had developed in six weeks. There was nothing remarkable in the family history. Her personal history included an attack of scarlet fever as a girl, and a menorrhagia at the menopause at 42 years of age. Her blood pressure was 140/110. There was no evidence of other visceral or nervous diseases.

She was given 1 grain of thyroid extract three times a day (equal to 15 grains fresh gland daily), and improved greatly. By some misunderstanding she failed to take the gland for one week, and retrogressed much. Thereafter the treatment was continued, and she steadily improved, the dose being gradually reduced until in a few months she was taking 1 grain (dry) daily. This she has continued to take, and has returned to her usual health and activity.

Llandilo, Carm.

J. H. LLOYD, M.D.

EMBOLISM OF THE ABDOMINAL AORTA ASSOCIATED WITH AURICULAR FIBRILLATION

Mr. A. H. Winchester's account in the *British Medical Journal* of February 18th of a case of embolism of the larger arteries associated with auricular fibrillation prompts me to record a similar case, which I encountered a year ago, in which the abdominal aorta appeared to be the site of the occlusion. The following is a digest of the notes I took at the time.

The patient was a healthy, stoutish woman of 73, who had received no medical attention whatever for upwards of a quarter of a century. No history of previous ill-health could be obtained. On February 22nd, 1932, during an influenza epidemic, she sent for me because she thought she had a cold. I found her sitting in a chair in the kitchen, a little breathless and cyanosed, and slightly distressed. She had no fever, but a very fast and very irregular pulse, and on examination I diagnosed her condition as auricular fibrillation. I ordered her to bed at once, and prescribed 15 minims of tincture of digitalis three times daily. All went well, and within a day or two the heart slowed down and resumed its normal rhythm. She continued to take the digitalis until February 28th, when, as everything was progressing favourably, I stopped it.

I saw her at noon on March 3rd, and she appeared quite herself again, protesting loudly at being kept in bed. As the action of the heart was then satisfactory I allowed her to get up. Three-quarters of an hour after I had left the house I received an urgent message of recall. The story I was told on arrival was that she had dressed herself and walked about the bedroom, and while in the act of spreading the counterpane had been seized with agonizing pain in both legs. All power left them, and she collapsed, helpless, by the side of the bed. The first thing which attracted my attention on entering the bedroom was the appearance of shock which the patient presented. An hour previously I had left her bright and smiling; now her face was grey and drawn, the expression anxious, and beads of sweat stood on her brow. The breathing was shallow, and the pulse feeble and rapid. She moaned continually for ease from the pain, which was in the lower abdomen and back, and down both legs. She could not indicate any one place as worse than another, the pain being equally severe over all these parts. She passed urine unknowingly.

On examination I noticed that both legs were much cooler than the rest of the body. The skin was white and shining, and had none of the feeling of resilience of healthy flesh. She could move the left leg a little, the right not at all. In spite of ten minutes' diligent search I could not detect a flicker of a pulsation in either of the femoral arteries. Unable to see that I could do anything useful, I swathed the legs in warm coverings—placing hot-water bottles about them—gave morphine liberally, and left her when she was more comfortable. Returning eight hours later, I found I had reckoned without the insensibility of the legs and the enthusiasm of the