abnormal findings. The white blood cells numbered 14,000 per c.mm. (86% polymorphs). A straight x-ray film of the abdomen and an intravenous pyelogram showed no abnormality. A catheter specimen of urine was sterile and the deposit normal.

Streptomycin, 0.5 g. twice daily, was prescribed for four days. The temperature was 100° F. (37.8° C.) on the morning after admission, but thereafter all signs and symptoms resolved. Six weeks later she was continuing well.

One evening in February, 1953, she was again admitted complaining of colicky pains, radiating from the left loin to the left iliac fossa. There was nausea and retching with each spasm of pain. Micturition caused lower abdominal discomfort. The bowels had acted normally. Menstrual history: 12, 5/30; regular; moderate flow; no dysmenorrhoea. Menstruation had started on the day of admission, three days later than expected.

On examination her temperature was 98° F. (36.7° C.), pulse 86. The cardiac apex beat was on the left. There was tenderness with guarding in the left loin and left iliac fossa. A provisional diagnosis of renal colic was made. Pethidine, 100 mg., and atropine sulphate, 1/100 gr. (0.65 mg.), were given by injection. The patient vomited once during the night. The next morning she still complained of colicky pains. Her temperature was 98.6° F. (37° C.), pulse 80. The tongue was clean. There was tenderness with guarding in the left iliac fossa. No area of dullness was detected on abdominal percussion. The vulva was normal and the hymen intact. On rectal examination no pelvic tumour or localized tenderness was detected. The white cells numbered 15,000 per c.mm. (92% polymorphs). A catheter specimen of urine was sterile and the deposit normal. A straight x-ray film of the abdomen showed no urinary calculus.

By that evening the patient had become flushed, the tongue was furred, the temperature 100° F. (37.8° C.), and pulse 120. There was acute tenderness in the left iliac fossa, with guarding and rigidity. Rebound tenderness had now developed.

Under a general anaesthetic it was possible to palpate a sausage-shaped tumour in the left iliac fossa. A right lower paramedian incision was made. The left Fallopian tube was found to be plum-coloured and grossly swollen, having twisted twice in an anti-clockwise direction. The left ovary was not involved in the torsion. The right tube and ovary, the uterus and the appendix were normal in appearance. No Meckel's diverticulum was found. A left partial salpingectomy and appendicectomy were performed. The patient's convalescence was uneventful. A gonococcal complement-fixation test was reported to be negative.

Pathological Report.—Macroscopically the specimen consisted of a contorted Fallopian tube, the tissues of which were swollen and of a deep purple colour. The dilated parts of the tube contained blood-tinged yellowish fluid. The medial 15 mm. of the tubal lumen was of normal dimensions, but gave place laterally to a uniformly dilated section 95 mm. long and 20 mm. in diameter. The mucous membrane lining this part showed longitudinal ridges representing the mucosal plicae. These were widely separated by intervening strips of smooth mucous membrane. At its lateral extremity a transverse septum separated this loculus from another, 20 mm. long and 15 mm. in diameter. This latter cavity was lined by smooth and shining mucous membrane and did not communicate with the peritoneal cavity. The tubal fimbriae, firmly matted together, were adherent to the peritoneal aspect of its wall.

Histologically, sections from all the areas examined showed much oedema combined with haemorrhage, especially in the subserous layer, moderate polymorphonuclear leucocytic infiltration, and recent venous thromboses. The arteries examined were all patent. Section of the medial end of the tube showed a normal mucosal pattern. Section of the wall of the lateral loculus showed a thin lining of fibrous tissue clothed with a single layer of cuboidal epithelium.

The fimbriae had multiple points of fusion, one to another, indicative of past inflammation. No evidence of recent sepsis was seen in any section.

The findings were in keeping with torsion of a hydrosalpinx which had occurred long enough before operation to allow reactive polymorphonuclear infiltration to follow the oedema, haemorrhage, and venous thrombosis.

COMMENTS

The torsion of the Fallopian tube here reported was undoubtedly related to its pathological condition. The aetiology of the hydrosalpinx was not certain. The history of vulvitis was not conclusive. The first episode of pains in the left iliac fossa may have been due to a partial torsion of the normal tube, which settled down spontaneously, after causing enough tissue reaction to produce the hydrosalpinx. The intermittent colicky nature of the pain, and the absence of "shock" in torsion of the Fallopian tube not involving the ovary, were well illustrated.

My thanks are due to Professor Ian Aird and to Mr. R. H. Franklin, under whose care the patient was admitted, for permission to publish a report of this case, and to Dr. G. A. K. Missen for the pathology report.

J. M. THOMAS, M.B., B.Ch., M.R.C.O.G.,
House-surgeon, Department of Surgery, Hammersmith Hospital.

REFERENCES

- de Soldenhoff, R. (1949). *British Medical Journal*, 2, 263.
- Neel, H. B., et al. (1943). *Amer. J. Obstet. Gynec.*, 45, 326.
- Novak, E. (1949). *Obstet. gynec. Surv.*, 4, 499.
- Shaw, R. E. (1949). *British Medical Journal*, 2, 421.
- Tauber, R. (1949). *Amer. J. Surg.*, 77, 661.
- Wolf, J. (1951). *British Medical Journal*, 1, 1062.

A Case of Bacterium Friedländeri Meningitis

The comparative rarity of this condition seems to justify publication of another case similar to that of Eberlie (1953).

CASE REPORT

A dock worker aged 48 was admitted to hospital on January 15, 1952, with a febrile illness of 10 days' duration, characterized by general malaise with headache and a troublesome cough with jelly-like sputum. There was nothing of note in his past history, except for an attack of nephritis in 1950, from which he had made an apparently complete recovery.

On admission his temperature was 103° F. (39.4° C.), pulse 80, and respirations 20. Sensorium lucid, but cerebra- tion slow. Herpes labialis. Fauces injected. Tympanic membranes normal. Scattered rhonchi in lung fields. Neck rigidity and inability to kiss his knees. Pupils reacted to light and accommodation. Fundi normal. No cranial-nerve palsy and no other evidence of focal lesion in the nervous system. C.S.F. opalescent, containing an excess of pus cells and what appeared at first sight to be Gram-negative diplococci. Treated with sulphadimidine, 2 g. four-hourly for the first 24 hours, and then 2 g. six-hourly. The temperature fell by crisis, and on January 17 he was afebrile, much more alert, and appeared clinically to be well on the road to recovery. That day the laboratory reported that from the C.S.F. an organism had been grown with the cultural and morphological properties of *Bacterium friedländeri* (*Klebsiella pneumoniae*). A similar organism was cultured from the sputum. As the clinical condition of the patient had so greatly improved, it was decided to continue treatment purely with sulphadimidine, and the events justified this decision. The patient was, in fact, discharged home well on February 2, and when seen a month later at the follow-up clinic demanded to return to work. Before his discharge from hospital, radiographs of the chest showed no evidence of parenchymal involvement, and radiographs of the sinuses were also clear.

COMMENT

Thompson *et al.* (1952), in reporting a case of *Kl. pneumoniae* meningitis with bacteraemia and pneumonia, made a careful review of the literature and analysed 118 cases, 31 with recovery. According to their Table 3, in the pre-sulphonamide era, of 60 cases only 4 recovered, but with sulphonamides alone, of 20 cases 9 recovered. With a combination of sulphonamides and penicillin, of 15 cases 9 recovered; and with sulphonamides, penicillin, and streptomycin, of 13 cases 7 recovered. It is noteworthy that with penicillin and streptomycin, alone or in combination, none recovered. On the other hand, one case (Martin and Sureau, cited by Bombardier, 1950) recovered with chloramphenicol treatment after failure of sulphonamides, penicillin, and streptomycin.

On theoretical grounds it would appear that the drug of choice in the treatment of *Bacterium friedländeri* meningitis is chloramphenicol, because of the ready attainment of therapeutic levels in the cerebrospinal fluid (Ross *et al.*, 1949; Hewitt and Williams, 1950). There is some evidence that oxytetracycline ("terramycin") also crosses the blood-brain barrier (Werner *et al.*, 1950), but aureomycin is known to be a poor drug for systemic administration in meningitic disease.

The case here reported did extremely well on sulpha-dimidine alone, and this shows that clinical judgment must remain, in the last analysis, the supreme arbiter, even in questions of treatment. Except when confronted with fulminating disease, I would renew a plea, made by Banks and others, for withholding intrathecal treatment with antibiotics in purulent meningitis until the bacteriological diagnosis and the clinical course of the disease show it to be imperative. Sulphonamides by the oral or parenteral route, when they do not effect a cure, always give time for deliberation and for completely informed final treatment.

My thanks are due to Dr. Martin Hynes for the bacteriological reports.

E. MONTUSCHI, M.D., M.R.C.P.,
Physician, Italian Hospital, London, W.C.1.

REFERENCES

- Bombardier, J. P. (1950). *Ann. Med.*, 51, 543.
Eberlie, W. J. D. (1953). *British Medical Journal*, 1, 1204.
Hewitt, W. L., and Williams, B. (1950). *New Engl. J. Med.*, 242, 119.
Ross, S., Bischoff, H., Preisser, W., and Orr, W. (1949). *J. clin. Invest.*, 28, 1050.
Thompson, A. J., Williams, E. B., Williams, E. D., and Anderson, J. M. (1952). *Arch. intern. Med.*, 89, 405.
Werner, L. A., Knight, V., and McDermott, W. (1950). *Proc. Soc. exp. Biol., N.Y.*, 74, 261.

Perforation of a Duodenal Ulcer into the Common Hepatic Duct: With Relief of Obstructive Jaundice

Gastro-intestinal biliary fistulae are not uncommon as a complication of cholecystitis and gall-stones. Kehr (quoted by Hicken and Coray, 1946) found them in 5% of 2,000 patients having an operation on the biliary tract. Perforation of a duodenal ulcer into the biliary tract, however, is very rare. Lønnerblad (1932) described a case and collected 11 others from the literature. Barclay (1936), Hicken and Coray (1946), Nivière (1947), and Vergoz and Lebond (1948) described and collected further cases from the literature, making 30 in all. The evidence in many of the reported cases is only radiological—that is, filling of the biliary tract by a barium meal—but in some the diagnosis was confirmed at operation. In most of the cases reported no special symptoms, apart from those due to the duodenal ulcer, could be attributed to the fistula, but sometimes, particularly where the perforation was into the gall-bladder, the symptoms were those of an acute upper abdominal emergency.

CASE REPORT

A company secretary aged 65 developed a few small painless red nodules on his left leg. Biopsy showed these to be due to reticulosarcoma. The nodules cleared up

after radiotherapy, but a large ulcer developed at the back of his left knee which never healed. Examination of the peripheral blood showed no abnormality.

Two years later, on November 9, 1952, he was admitted to hospital with marked cachexia, flatulent dyspepsia, and a four-weeks history of painless obstructive jaundice. His faeces were pale and his urine contained bile. His serum bilirubin was 4 mg. per 100 ml. and the direct van den Bergh reaction was positive. Although his general condition deteriorated the jaundice improved dramatically on December 5. He died in coma on December 17, which was almost certainly uraemic.

At necropsy there was no trace of the obstructive jaundice. The pancreas was diffusely permeated by reticulosarcoma, giving the appearance usually associated with a carcinoma of the head of the pancreas (see Fig.). The intrahepatic

and extrahepatic biliary tract above the pancreas was extremely distended. The gall-bladder was distended but contained no stones. In the head of the pancreas the duct cavity was compressed so that the lumen had almost disappeared, and contained no bile. The common hepatic duct communicated with the duodenum through the crater of a large chronic ulcer on the posterior duodenal wall 4 cm. from the pylorus. On histological examination the liver cells contained some bile pigment but there was no dilatation of the peribiliary bile ducts or any sign of inflammation around them. Both lobes of the thyroid gland showed nodules of reticulosarcoma, and both kidneys were almost completely replaced by tumour tissue.

COMMENT

In spite of the frequency of duodenal ulcers and their close anatomical proximity to the biliary tract, only very few cases of choledochoduodenal fistula due to perforation of a duodenal ulcer have been found in the literature. Many of these reports are based on radiological evidence only. A case is described in which at necropsy obstructive jaundice was shown to have been relieved by perforation of a duodenal ulcer into the common hepatic duct, thus producing a spontaneous choledochoduodenostomy. No other symptoms could be attributed to the duodenal ulcer or to the perforation. No similar case has been found among those described in the literature.

I am grateful to Professor T. F. Hewer for his help and advice and to Dr. C. D. Evans for the clinical details.

B. RUEBNER, M.B., Ch.B., D.Path.,
Department of Pathology, University of Bristol.

REFERENCES

- Barclay, A. E. (1936). *The Digestive Tract*, p. 249. Cambridge.
Hicken, N. F., and Coray, O. B. (1946). *Surg. Gynec. Obstet.*, 82, 723.
Lønnerblad, L. (1932). *Acta radiol., Stockh.*, 13, 551.
Nivière, J. (1947). *J. Radiol. Electrol.*, 28, 405.
Vergoz, C., and Lebond (1948). *Mém. Acad. Chir., Paris*, 74, 455.