MEDICINE AND PATHOLOGY.

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Acute Pancreatitis.—The Middleton-Goldsmith Lecture for 1889 was delivered before the New York Pathological Society on the 16th February, by Dr. Reginald H. Fitz, Professor of Pathology and Anatomy, Harvard University. He discussed in full detail the subject of acute pancreatitis, including pancreatic haemorrhage, hemorrhagic, suppurative, and gangrenous pancreatitis, and disseminated fat necrosis, and brought forward a list of 70 cases. The lecture is printed in the Boston Med. and Surg. Journal of 7th, 14th, and 21st March, 1889, and has since been published in book form, with plates, tables, &c., by Messrs. Cupples & Hurd, Boston. The history and bibliography of the subject are very fully given, and the clinical history, post-mortem appearances, and microscopic appearances of a large number of the cases quoted are carefully described. We have space only for the concluding paragraphs of the lecture, in which Dr. Fitz gives his conclusions, as follows:—

The evidence presented in this paper is intended to establish the fact that acute inflammation of the pancreas is both a well characterised disease, and one which is much more frequent than is generally thought.

It is of great consequence that it should be recognised, for the following reasons:—It represents a serious complication of what, by itself, is a relatively simple affection—viz., gastro-duodenitis. It is an important cause of perforation, and one readily overlooked. It has been repeatedly confounded with acute intestinal obstruction, and has thus led, in several instances, to an ineffective laparotomy; an operation which, in the early stages of this disease, is extremely hazardous.

Method of Origin.—Acute pancreatitis commonly originates by the extension of a gastro-duodenal inflammation along the pancreatic duct. It may also be induced by the occurrence of haemorrhage in the pancreas. This may be of traumatic origin, although usually arising from unknown causes. The pancreatic haemorrhage may likewise be secondary to inflammation of the pancreas.

Pathological Anatomy.—The anatomical varieties are the suppurative, hemorrhagic, and gangrenous. The first may be acute, but is usually subacute or chronic. The second is generally peracute or apoplectiform. The gangrenous variety runs an acute course.

Suppurative pancreatitis may result in an evacuation of the abscesses into the stomach or duodenum, or they may open into the cavity of the great omentum, which, transformed into a large peritoneal abscess, may, in turn, open into the digestive tract. Pylephlebitis and abscess of the liver may follow. Disseminated fat necrosis is comparatively infrequent.

Hemorrhagic pancreatitis usually proves fatal in from two to four days. The gross lesions are then those of hemorrhage within and near the pancreas, extending into the subperitoneal fat tissue, perhaps as far as the pelvis. Peripancreatitis may be expected, and disseminated fat necrosis is common.

Gangrenous pancreatitis, although it may be secondary to a perforating inflammation of the gastro-intestinal or biliary tracts, usually results from a hemorrhagic pancreatitis, and proves fatal in the course of a few weeks. The gangrenous processes extend to the parapancreatic tissue, and produce more or less complete sequestration of the pancreas. The peritoneal wall of the omental cavity becomes inflamed, that covering the pancreas may be destroyed, and the sequestrated gland may lie in the omental cavity, soaked in pus, and attached only by a few shreds. Both pus and pancreas may be discharged into the intestine. Splenic thrombophlebitis is not uncommon, but hepatic abscesses are rare. Disseminated fat necrosis is frequent.

Symptoms.—The common symptoms of acute pancreatitis are sudden, severe, often intense, epigastric pain, without obvious cause, in most cases followed by nausea, vomiting, sensitiveness, and tympanitic swelling of the epigastrium.
Abstracts from Current Medical Literature.

There is prostration, often extreme, frequent collapse, low fever, and a feeble pulse. Obstinate constipation for several days is the rule, but diarrhoea sometimes occurs. If the case does not end fatally in the course of a few days, recovery is possible, or a recurrence of the symptoms in a milder form takes place, and the characteristics of a subacute peritonitis are developed.

Diagnosis.—The symptoms are essentially those of a peritonitis beginning in the epigastrium and occurring suddenly, during ordinary health, without obvious cause. The diagnosis, therefore, is based on pain, tenderness, and tympany limited to the region of the pancreas, and on the gradual development of a deep-seated peritonitis in the same place.

Differential Diagnosis.—The differential diagnosis lies, practically, between an irrigant poison, perforation of the digestive or biliary tracts, and acute intestinal obstruction.

An irritant poison is excluded by the history of the case, and by the examination of the vomit.

Perforating ulcer of the stomach or duodenum is to be excluded by the absence of pain after eating, haemorrhage from the digestive canal, and cachexia.

Acute perforation of the transverse colon is rare, and the resulting peritonitis progresses more rapidly, and is likely to be general. Perforation from gall stones is usually preceded by attacks of biliary colic and jaundice, while the seat of the pain is rather in the region of the gall bladder than in that of the pancreas.

Acute intestinal obstruction is most likely to give rise to doubt. It is to be eliminated by determining, through injection, the patency and capacity of the large intestine, by the rarity, in the epigastrium, of an obstructed small intestine, by the immediate presence of localised tenderness, and by the usual absence of conspicuous general tympany, or limited distention of intestinal coils.

Treatment.—It is evident that all treatment, at the outset, can be nothing but palliative. With the formation of pus in the omental cavity comes the opportunity of the surgeon. The possibility of the successful removal of the gangrenous pancreas is suggested by the healthy condition of a patient seventeen years after he had discharged this organ from his bowels.—D. M’P.

Test for Urobilin.—M. Grimbert, in a communication presented to the Société de Pharmacie de Paris (Journ. de Pharmacie et de Chimie, July, 1888), describes a new process for the recognition of urobilin in urine. This consists in heating the urine, mixed with an equal volume of hydrochloric acid, just to the boiling point. The mixture is allowed to become cold, and is then shaken with ether, which becomes coloured reddish-brown, and presents a beautiful green fluorescence. The ether solution, examined spectroscopically, shows the characteristic absorption band of urobilin, situated between the lines b and F.—(Boston Med. and Surg. Journ., 4th April, 1889.)—D. M’P.

Detection of Blood Stains.—Ferry de la Belone (Journ. de Pharm. et de Chimie, March, 1888; from Rep. de Pharm.) recommends the following method:—If the suspected stain is on linen or other fabric, a few filaments are placed on the surface of a solution of sodium chloride (1 to 1,000), in a small glass tube; after some hours the liquid assumes a brownish-rose tint. If spectroscopic examination of the liquid in the tube indicates the presence of haemoglobin, it is important to search for blood corpuscles. A drop or two of a concentrated solution of chloral is added to the liquid, when a rose-coloured precipitate, which soon settles to the bottom of the tube, is formed. The supernatant fluid is removed by means of a pipette, and a drop of the precipitate spread out on a glass slide, and gently warmed by passing the slide several times back and forth over the flame of a lamp. A reddish coagulum is formed, and a clear liquid which is removed with filter paper. The coagulum is stained with fuchsin, washed, and to it is then added a drop of dilute acetic acid. The preparation becomes immediately colourless, and the globules, coloured bright red, may be recognised under the microscope.
When the stain is found on instruments, wood, or stone, the powder obtained by scraping is placed in a small bag made of fine cambric, and suspended in the salt solution.

When mixed with earth, the separation of the globules is more difficult, the clay usually present causing a rapid precipitation in the salt solution. In this case an attempt should be made to separate, under the microscope, particles resembling, in colour, blood. Particles thus separated are then placed in a bag as before, and suspended in the salt solution.

To obtain haemin crystals, one or more drops of the brown-rose solution are taken, before treatment with chloral, and carefully evaporated to dryness on a glass slide, and warmed in the usual manner after the addition of a drop of glacial acetic acid.—(Boston Med. and Surg. Journ., 4th April, 1889.)—D. M'P.

**Prognosis of Mitral Disease in Children.** Dr. Holgate (Med. Chronicle, 1889).—The writer states as his opinion that valvular disease due to rheumatism warrants a more grave prognosis than similar lesions due to chorea. In rheumatic lesions not only are the valvular structures themselves more deeply implicated, but other structures are frequently involved as well—viz., the pericardium and the cardiac muscle. The affection due to uncomplicated chorea is almost invariably slight and soon disappears.

**On Reflex Cough.**—In a contribution to the Dtsch. Med. Wochenschr., No. 13, 1888, Dr. Kurz relates an interesting case of reflex cough. The patient was a woman, well advanced in pregnancy and in reduced health, who suffered from profuse leucorrhœal discharge. The immediate cause of the reflex cough was a mucous polypus growing from the cervix uteri. On removal of this the cough ceased. It is supposed that the expiratory centre was at the same time irritated by the presence of a laryngotraehitis.

**On the Clinical Significance of Colourless Stools.** T. J. Walker (Lancet, March, 1889).—After referring to the accepted views on this subject, the writer gives particulars of two cases in which colourless motions were a prominent sign and in which diagnosis of obstruction of the pancreatic duct was made. This diagnosis was confirmed post-mortem. From these cases it is concluded:—

1. That the formation of hydrobilirubin depends on the mutual reaction of the bile and pancreatic juice.
2. That hence a deficiency of pancreatic juice will produce clay-coloured stools equally with a deficient supply of bile.
3. That since only that portion of bile-colouring matter which takes part in the formation of hydrobilirubin is excreted in the feces, while the other colouring matters are re-absorbed, the pancreas, if hydrobilirubin cannot be produced without its aid, must play an important part in regulating the amount of colouring matter excreted and the amount again taken up by the bowel.

**Experimental Contributions to the Study of the Infective Power of the Flesh of Tuberculous Cattle.** (Münchn. Med. Wochenschrift, No. 35, 1889.)—Among observers, Chauveau in France, Gerlack, Günther, and Harnes in Germany, relate positive results obtained by feeding animals with infected flesh ; on the other hand, the French observers, Colin and Chatin, and in Germany, Semmer, Roloff, Möller, Brell, and others, arrived at negative conclusions. Dr. Kastur set himself the task to discover whether the muscle of infected oxen contained the tubercle bacillus, and whether the use of such infected meat is fraught with danger to man. He selected as the infecting medium the juice expressed from the muscles of tuberculous animals, and, with every antiseptic precaution, therewith inoculated guinea-pigs. The result was that of sixteen animals on which the observations were made, and which were inoculated with material obtained from twelve diseased cattle, not one became infected. It follows from this, that the muscle of infected oxen is not fitted to convey infection. In conso-
ance with these observations stands the fact that persons known to employ infected meat for food, as is evidenced by the observations made by Ballinger on the families of 570 flayers, embracing a total of 3,000 persons, are not more subject to the development of tubercular diseases than are those who do not use such food. That up till now observers have failed to detect bacilli in the muscles of infected animals would suggest, according to our author, that the flesh, even when uncooked, is harmless, and that when cooked, it may be eaten without risk.

DISEASES OF THE EAR.

By Dr. Walker Downie.

Artificial Drum-Membrane as a Curative Agent.—To the St. Louis Polyclinic for July, 1889, Dr. Spencer of St. Louis contributes a paper on the above subject. The conclusions come to by him on this subject were given in a paper over thirteen years ago, and in the interval they have been, in his opinion, fully confirmed. Of the various forms of artificial drum-membrane he considers the cotton pellet to be preferable on account of its simplicity, easy introduction, comparative safety in its use, and greater uniformity in its effects. In addition it is of distinct value as a therapeutic agent. In employing them to this end, he uses what he calls a "dry medicated artificial membrane." This is made of cotton wool which has been agitated with finely powdered boric acid, pellets of which are introduced into inner end of external meatus by means of forceps. If the ear is discharging, these soak up and tend to check the discharge, and by their use hearing-power in some cases is improved.

In connection with this subject reference may be made to the "new antiseptic artificial membrana tympani," exhibited by Dr. Ward Cousins at the recent annual meeting of the British Medical Association (see British Medical Journal, 28th September, 1889). This artificial drum-membrane is shaped like a small hat with tapering crown and flat rim. The material is composed of compressed cotton-fibre swollen by prolonged immersion and saturated in antiseptic oil and ether. They are light, soft, and flexible, cause no inconvenience by their presence, and as they have a delicate flesh colour, they readily escape observation.

Dr. Cousins recommends the introduction of a fresh one each day, and where otorrhoea is profuse a more frequent renewal may be necessary.

Antiseptics in the treatment of Otorrhoea.—In the Medical Record for July, 1889, Dr. R. L. Randolph, of Baltimore, writes on the above subject. After extended experience of carbolic acid, boric acid, iodiform, and bichloride solutions in the treatment of otorrhoea, he has hit upon an acid solution of bichloride of mercury which he now much prefers to any of the foregoing. This consists of the following:—

R. — Hydarg. bichlor., gr. ss.
     Acid tartaric, gr. xx.
     Aq. ad., 5 vi. M.

The directions given are to have the affected ear thoroughly cleansed by syringing with warm water, then to have the meatus filled with this sublimate solution. The addition of the acid to the mercuric solution prevents the precipitation of albumen from the secretion in the ear; and its power as an antiseptic is rather increased than lessened by the presence of the acid.

"Wrinkle" for Diagnosing Perforation of Drum-Membrane.

—The following procedure has been devised by Dr. Spear as an aid in the detection of perforation of the membrana tympani. The aural speculum is placed in position in the usual way, a piece of clear glass, which must be cold, is then held close over the speculum, and the surgeon, aided by mirror,