in a patient without affection of any gland so far as one can see. 10. Acute parotitis is not a synonym of mumps, for mumps may be present without any apparent affection of the parotid gland.

Bibliography.—Practitioner, February, 1908 (Edgecombe: Metastatic Affection of Pancreas in Mumps). Westminster Hospital Reports, vol. xv. (Mumps). Brit. Med. Jour., Oct. 26th, 1907, p. 1132; April 18th, 1908, p. 925; April 25th, 1908, p. 988; and May 2nd, 1908, p. 1045. Leeds.

Clinical Notes :

MEDICAL, SURGICAL, OBSTETRICAL, AND THERAPEUTICAL.

THE BILIARY CIRRHOSIS OF CHILDREN, OTHER WISE KNOWN AS "INFANTILE LIVER."

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FOR many years a peculiar disease of the liver of infants accompanied with fever and attended with a high mortality has been recognised in India (Bengal). The morbid anatomy and pathology of this disease were well described by Major J. B. Gibbons, I.M.S., in 1891, who considered it to be a form of biliary cirrhosis and suggested that the term "intercellular cirrhosis" would be appropriate, as there occurred a primary development of fibrous connective tissue within the lobules between the liver cells. The other organs of the body seem unaffected except the kidney, which shows marked degeneration, and shedding of the epithelium of the tubules. The usual post-mortem appearances were œdema of the feet and legs and generally of the face and hands and a small quantity of fluid in the abdomen. All the tissues of the body are bile-stained. In the earlier stages the liver is enlarged, but later it becomes small. There is no perihepatitis but the liver substance is tough and the cut surface granular. The liver cells are much altered, many being destroyed and others converted into masses of granular debris. In the interlobular bands of connective tissue many bile-ducts are found. The intercellular fibres are not applied closely to the degenerated cells but form a network in the spaces of which the degenerated cells lie. It was suggested that the disease is due to an irritant which primarily attacks the liver cells but which also leads to proliferation of the connective-tissue elements. The proliferation of the bile-ducts is not so easily explained, but it was suggested by Paltang to be a curative process in which a regeneration is brought about by a multiplication of bile-ducts from which masses of liver cells were formed. The disease is not due to alcohol, there is no evidence of syphilis, and the pathological changes are quite different from the liver enlargement which follows malaria.

The disease is almost entirely limited to children between 6 months and 2 years of age. The onset is insidious. Some families seem liable to the disease. It occurs amongst rich and poor but is probably less common amongst Mahomedans than Hindus. It is as common amongst infants fed with other milk than that of their mothers. The disease varies in its duration, sometimes lasting a month only, and at other times for perhaps two years. Generally the first symptom noticed is enlargement of the liver, but early symptoms are nausea, vomiting, sallow complexion, and slight fever. The child loses its appetite, becomes irritable, develops thirst, and becomes distinctly feverish, especially towards night. The liver enlargement progresses and may become very extensive. Some tenderness over the liver is detected. In the later stages jaundice sets in and the child is markedly ill. Œdema occurs also in the later stages. There is a deficient excretion of bile, the stools being clayey and whitish, but the urine is deeply stained. The fever seems to increase with the disease. The prognosis is extremely unfavourable but it is impossible to estimate the case mortality as there are no trustworthy figures available. The disease is said to be common in Madras and it has been seen in Bombay. The clinical course of the disease was well described by Dr. Jogendra Nath Ghose in the Transactions of the First Indian Medical Congress (1894).

Since 1894 careful inquiries (in the absence of medical

certificates) have been instituted in Calcutta into the causes of all deaths, and the prevalence of this disease has been clearly shown. The symptoms and course of the disease shown by later inquiries confirm the early descriptions. I am not aware, however, that anything further has been done to explain its pathology or to discover its origin.

We had in Calcutta in 1907 no less than 636 deaths of children from this disease. Of this number 92 only were under 12 months of age. 138 only were over two years of age. The great bulk of the cases—viz., 64 per cent.—died at ages between one and two years. The mortality amongst Hindu children is much greater than amongst Mahomedans, but male and female children are about equally attacked. I append a table showing the details of our statistics.

Infantile Liver for 1907.

Ages.	Hindu.		Mahomedan.		Total.
	Male.	Female.	Male.	Female.	
Under 3 months ...	2	—	—	—	2
" 6 " ...	14	7	2	2	25
" 9 " ...	12	10	3	4	29
" 12 " ...	15	7	6	8	36
" 15 " ...	52	44	19	12	127
" 18 " ...	14	12	1	4	31
" 21 " ...	83	71	11	9	174
" 24 " ...	29	30	7	8	74
Over 24 " ...	55	45	20	18	138
—	276	226	69	65	636

It is important in connexion with the theory that this disease is brought about by absorption of toxic material from the bowels to note that diarrhoeal diseases (more particularly acute and chronic enteritis and the complaint corresponding to summer diarrhoea) are less common in Calcutta than in England, the mortality from diarrhoeal disease being 21 per 1000 births in Calcutta, as against 31 per 1000 births in England and Wales (1904). Considering that the disease occurs in sucklings, in infants artificially fed, and in children between one and two years of age who are given all sorts of food, it is difficult to ascribe the disease to errors of diet. It is generally considered to be a progressive disease and once started it is almost always fatal. Taking all things into consideration, we can most reasonably conclude that it is a parasitic disease, but whether microbic in origin or due to larger forms there is no evidence to show. Calcutta.

CLINICAL NOTES OF TWO CASES OF PUERPERAL FEVER TREATED BY CURETTAGE AND APPLICATION OF PURE IZAL.

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THE following cases of puerperal fever seem to indicate the value of early curettage combined with the application of undiluted izal in order to prevent re-infection through the raw surface. In each case labour was uncomplicated, the after-birth was complete, and nothing had been introduced into the uterus.

CASE 1.—A woman, aged 34 years, a multipara, developed a temperature of 102·4° F., with a pulse of 108, on the third evening after confinement, the lochia remaining unchanged. Aperients and sedatives failed to reduce the fever, which reached 103·2°, with pulse 100, on the fourth evening, and a slight rigor occurred. The uterus was explored with the finger and was found to be free from any appreciable trace of after-birth or clot. An intra-uterine douche of lysol 1 in 320 was given, together with the following treatment: antistreptococcic serum (B. and W.'s polyvalent) ten cubic centimetres and one intra-uterine douche daily; frequent doses of liquor ferri perchloridi and alcohol; and vaginal douches of biniodide of mercury 1 in 2000 four

times a day. In spite of this the temperature remained constantly over 102° , and on the sixth evening it was 103° , with pulse 106 and shivers, the lochia being scanty but not in the least offensive. The uterus was again explored under chloroform and some small polypoid excrescences were scraped away with the finger-nail, and a lysol douche at 120° was given as the bleeding was rather brisk. Under the microscope the scrapings showed no trace of chorion or chorionic villi but consisted mainly of decidua (its glands showing inflammatory changes), some fibrinous clot, and a few scattered shreds of muscle-fibre. On the following morning the temperature was 99.6° . On the seventh evening it went up to 101.8° and, assuming a hectic character with morning remissions, it gradually rose to 104.4° , with pulse 128, by the eleventh day. The uterus was now thoroughly scraped with a blunt curette and the whole of its lining was carefully swabbed with pure izal. The temperature dropped to 98.6° but mounted again to 104.4° on the following evening. However, from this time onwards the fever rapidly decreased, the shivering fits ceased, and recovery was only interrupted by two relapses of the temperature—one to 104.4° on the fourteenth day (probably due to emotion caused by a family excitement), and the other to 101.8° and 103.2° on the sixteenth and seventeenth days respectively (when solid food was taken for the first time). After this there was no more fever and recovery was complete.

CASE 2.—A woman, aged 32 years, a multipara, was attended by the same midwife and pupil in the interval between the confinement of the patient in Case 1 and the appearance of puerperal fever. She developed a temperature of 102° , with pulse 100, on the third day after confinement. The bowels and breasts were rectified but after a morning remission to 99.6° , the temperature on the fourth evening ran up to 104.4° , with pulse 130 and a rigor. The lochia were decreased in amount, were not offensive, and everything pointed to an infection similar to that of the previous case. Without delay the patient was anaesthetised and the uterine cavity was explored, but no trace of secundines was palpable. The walls were thoroughly scraped with a blunt curette (the blade guarded by a forefinger) and the raw surface was swabbed with pure izal. After the operation the temperature fell to 99.6° , with pulse 88, and there was no recurrence of the fever. Vaginal douches of biniodide of mercury 1 in 2000 (followed by sterilised water) were given for a few days as a precautionary measure and recovery was uninterrupted.

In neither patient was any lesion found in the vaginal canal, or any tenderness or thickening in the pelvic fascia or peritoneum.

Worcester.

A NOTE ON A NEW METHOD FOR THE REPAIR OF PERFORATION OCCURRING DURING THE SUBMUCOUS RESECTION OF THE NASAL SEPTUM.

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WHEN examining the nose of a patient who has undergone a submucous operation on the nasal septum a perforation is not infrequently discovered. Such an occurrence is not only a source of some annoyance and inconvenience to the patient but is always an eyesore to the operator, although he may not be in fault. Indeed, in the case of a patient whose mucous membrane has been destroyed on one or both sides by the removal of a spur or by an ulcerative process, in performing the submucous operation on the nasal septum it is often impossible to avoid a perforation. Some few months ago when resecting a septum with an extreme angular, longitudinal deviation I found when proceeding to put the flaps of mucous membrane together that both sides had been perforated and that there was a hole in the resulting septum. There being an excess of mucous membrane in the flap on the convex side, I decided to endeavour to utilise part of it for the repair of the septum. Accordingly I cut off a piece of mucous membrane, in size about a quarter of an inch square, and after carefully cleansing with a warm normal saline solution I interposed the excised piece between the flaps of mucous membrane in such a

manner as to cover completely the perforation. The packing was allowed to remain in the nose for 24 hours. When the packing was removed I found that both flaps approximated and that the grafted mucous membrane covered the hole perfectly. The after-treatment consisted merely of cleansing the nasal cavities with a weak alkaline solution. I saw the patient three months after the operation; the grafted mucous membrane was in the same position in which it had been originally placed and had united with the mucous membrane of both sides of the septum. Three months ago I had another successful result in a similar case. What really occurred in both the above cases was a union of the two perichondriums on the one side and a union of mucosa and perichondrium on the other side.

New York.

Medical Societies.

ROYAL SOCIETY OF MEDICINE.

CLINICAL SECTION.

Dr. James Mackenzie's Ink Polygraph.

A MEETING of this section was held on Jan. 8th, Sir THOMAS BARLOW, the President, being in the chair.

Dr. JAMES MACKENZIE demonstrated the use of his Ink Polygraph for taking and interpreting graphic records of the movements of the circulation. He said that the necessity for obtaining graphic records of the movements of the circulation was now universally recognised, but there had hitherto been a difficulty in obtaining a suitable instrument. Apart from the trouble of blackening and varnishing tracings, the present methods were not convenient, especially when long tracings were required. The ink polygraph met the necessary requirements as it enabled tracings to be taken of any length, and after a little experience it was very easy to use. In investigating any movement caused by the circulation it was necessary to record at the same time some standard event the position of which in the cardiac cycle was fixed and determined. Hence it was necessary that two events should be simultaneously recorded—the one to be investigated and the standard movement. The best and most trustworthy standard movement was the arterial pulse, radial and carotid; with the ink polygraph those movements could be recorded by one lever while the movement to be investigated was recorded by the other lever. Other movements, as those of the respiration, could also be recorded. The most important parts of the instrument (see Fig. 1) were: the body A, containing the paper-rolling and time-marker movements. The writing tambours BB, with supporting bar Bl. Wrist tambour C, with attachment Cl, for strapping on to wrist. Paper-roll bracket D. Paper-roll Dl. Cup receivers EE. Pens FFF. The body A had also a few other details requiring description. At the end of the machine were three keys. The large one (1) was for winding the paper-rolling movement. The top smaller stud-key (2) for winding the time-marker movement and the bottom one (3) regulated the speed of the paper passing through the rollers, the direction required being indicated by the letters F and S (fast and slow). On the top were the writing table (4), friction rollers, and tension spring (5) for passing along the paper. Behind those, to the right, was the start-and-stop lever (6) and to the left the fork (7) carrying the time-marker pen F. That fork vibrated at the rate of 300 per minute, an equivalent to one-fifth of a second. Attached to the case were two sockets. The square one in front (8) was for holding the writing tambours, whilst the other behind (9) supported the paper roll bracket. The writing tambours with their pen levers (11) were fitted with friction joints (10), enabling the pens to be adjusted to any desired position on the paper or lifted entirely away when not writing. The pen levers had each a small spring at the end which pressed on and held the pens in the grooves cut out to receive them. The rubber membrane was held in position by the ring which encircled it. Both tambours had inlets (23) for attaching connecting tubes (22). The wrist tambour C was in two parts. First the splint (16) which was strapped on the wrist was fitted with spring tongue and button (19), that rose and fell with the action