GALL STONES ASSOCIATED WITH ANOMALY OR INJURY OF BILE DUCTS.

BY

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The first and second of these three cases are very good examples of two anomalies of the bile ducts, which I described recently in an Arris and Gale lecture (*British Journal of Surgery*, April, 1923). The third is one more instance of injury to the common duct.

CASE I.

A married woman, aged 32, spare, and of rather a delicate type, had had indigestion on and off for several years. The indigestion was of the flatulent type with a good deal of discomfort soon after food, especially after certain kinds of food, such as fats and pastry. Considerable relief was obtained by belching. She had been liable to attacks of headache and what she called biliousness with vomiting. Bowels costive. Three weeks before admission she was suddenly seized with very severe pain across the upper abdomen and going through to the right shoulder-blade, requiring morphine. She was found to have a tender, distended gall bladder about the size of a small pear. There was no jaundice, and never had been any.

Operation March 22nd, 1923.—An incision was made through the upper right rectus sheath and the muscle displaced outwards. A tightly distended gall bladder was found with a stone, as large

FIG. 1.—A, Stone in cystic duct; B, accessory bile duct from right end of portal fissure to common opening with cystic duct into common bile duct; C, hepatic duct.

as a hazel-nut, wedged into the commencement of the cystic duct. The common duct was free from stones. The appendix was removed, as it was rather a thick adherent thing. There was a very short cystic artery, and on pulling up the gall bladder the right hepatic artery came up to a level anterior to that of the cystic duct. The cystic duct was divided and tied, and the cystic artery also. Owing to the large stone it was rather difficult to obtain a satisfactory view of the distal part of the cystic duct. After separating the gall bladder from the liver, bile was seen to come from the stump of a duct, close to the liver, the lumen of which was large enough to take an ordinary wax taper. This was ligatured after ascertaining that the main ducts were intact (Fig. 1).

The specimen showed the segment of a duct on the underside of the cystic duct, about 1/2 inch long. The distal end had been tied with the cystic duct. The wound was drained. The patient recovered satisfactorily, but at the end of two weeks several ounces of bile drained away from the wound. After discharging for a few days the sinus closed, and the patient has remained very well since; there has been no more leakage of bile.

CASE II.

A stout married woman, aged 57, who down to two years before admission had been quite well, then began with flatulent indigestion and what she called "windy spasms." She obtained relief by applying hot fomentations, and in the severe attacks by vomiting. Flatulence had been a marked feature during the two years. Bowels costive. Thirty years ago she had an attack of jaundice without pain; there has been no jaundice since. There was no tumour to be felt in the abdomen, but there was a little tenderness beneath the right costal margin.

FIG. 2.—A, Lower end of cystic duct, containing four small stones; B, ligature on cystic duct; C, duodenum; D, site of incision through posterior wall of duodenum; St, stomach.

into the main duct just above the ampulla (Fig. 2). The patient made a perfectly satisfactory recovery.

CASE III.

A married woman, aged 49, had had cholecystectomy and choledochotomy done by another surgeon in 1915. Many stones were said to have been found in the gall bladder and two in the common duct. The wound healed in the normal time and she was perfectly well for five years. In 1920 she began to have short attacks of severe pain in the upper abdomen, going through to the centre of the back and accompanied by shivering, rise of temperature, and jaundice. Between the attacks the jaundice entirely disappeared. The attacks gradually became more frequent and per-

sisted longer until the last attack, which has never settled. This began two months ago and she is still deeply jaundiced. There has not been any external biliary fistula since the wound healed eight years ago.

Operation February 11th, 1923.—The old scar was excised, and after separating many adhesions the common duct was found very much dilated, and a small stone felt in the ampulla. It could be moved upwards, but could not be made to present in the dilated part of the common duct. This dilated portion was opened and an attempt made to pass a probe down the duct. It would not, however, go beyond the upper border of the duodenum. After some manipulation the stone was made to appear just above the upper border of the duodenum and was removed by cutting on to it. It was then found that there was a stricture in the common duct about 1/2 cm. above the level of the duodenum, through which it was impossible to pass the finest needle. The dilated upper part of the duct was at least six times larger than the lower end, and so, after excising the stricture and tying the upper end of the lower segment, the dilated upper end was anastomosed to the duodenum.

The abdominal wound healed within ten days, the drainage tube having been removed on the third day. The patient has remained perfectly well ever since.

These three cases are interesting and are good instances of the more uncommon pitfalls in this area, full of traps for the unwary. I have called them uncommon rather than rare because since February, 1923, when I gave the lecture referred to above, I have had three cases showing an accessory bile duct, and I know of two others.

ABSCESS OF THE BRAIN THAT POINTED EXTERNALLY.

BY

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THE following case is of interest chiefly because it shows that a cerebral abscess may, like other collections of pus, point externally; also it illustrates the fact that changes in the fundus oculi may be absent even in the presence of conditions best calculated to favour their development and when they would be most valuable.

A man, aged 23, consulted his doctor in September, 1923, for pains of a neuralgic character over the left side of the head and discharge from the left ear, following an attack of earache, which was ascribed to cold caught when bathing and to a blow on the ear. In a short while the discharge ceased, but as the hearing was affected and the pain continued he was seen by an aurist, who reported mastoid tenderness with signs of external otitis involving the tympanic membrane, which was retracted but not perforated. Eventually, as the headache increased in intensity, he was admitted under my care into a private hospital. His father stated that for some weeks prior to the ear discharge it was noticed that he was irritable and did not look well, and had occasional attacks of neuralgia.

On admission he complained of trigeminal neuralgia on the left side, affecting chiefly the temporo-malar branch of the second division, together with more or less fixed pain referred to the temporal region above and in front of the external auditory meatus. He was emotional and excited at times, especially when the pains were most severe, which was usually at night. The temperature was normal or slightly below the normal line, but without marked remissions. The pulse was regular and on the slow side, but this was only occasional, though once or twice it was down to 58. The knee-jerks were active and the plantar reflex flexor. There was no nystagmus and no sign of ataxia when on his feet. There was no vomiting and the discs were normal; with the exception of a peculiar tendency to use a wrong word which failed to convey his meaning, and the habit of asking one to repeat a question, as though he did not understand (sensory aphasia), there was practically nothing to suggest a gross cerebral lesion. This defect of speech, however, was only apparent after a bad night, and then it lasted only a short time.

By the end of a fortnight the improvement in the symptoms was so marked that he was allowed to return home, but in a few days the headache and neuralgic pains returned in a severe form, and he vomited on two or three occasions; consequently he was brought back to the private hospital. It was now noticed that he looked pale and ill. The right plantar reflex was found for the first time to be extensor, and the difficulty in expressing himself was more marked, but only as a temporary defect. As there was some degree of deafness on the left side and the pains were referred chiefly to the malar bone and adjacent parts in front of the ear, he was again seen by an aurist, who could no longer detect tenderness over the mastoid, and found the external auditory apparatus practically free from disease and bone conduction normal.

A week later a swelling, with acute tenderness on pressure, was noticed over the zygomatic process of the left temporal bone, and this gradually increased. The skull was examined by x rays, but the radiograms showed nothing of importance. He now complained of slight dimness of vision of the left eye, but the disc was normal in appearance and there was no nystagmus. As the swelling increased, difficulty in opening the mouth was complained of.

It was decided to explore the swelling as it was rapidly increasing and was causing the disappearance of the zygomatic process, but there was no oedema of the eyelids. The patient was given a general anaesthetic (chloroform and ether), and an incision was made parallel to and just above the left zygomatic process; deep down in the temporal fossa pus was reached, and about two teaspoonfuls were evacuated and a drainage tube introduced.

For a few days the abscess drained and there was slight improvement in the patient's condition generally, but it was not maintained, and as the headache (now referred to the back of the head) became more intense and the speech defect more marked, it was decided to trephine over the left temporo-sphenoidal lobe; this was done on January 10th, 1924. Chloroform was administered by the open method, and just as consciousness was lost he ceased breathing and artificial respiration was resorted to. This was kept up for about three hours, and various efforts made to stimulate the respiratory centre, but without success, for though the heart and circulation continued to function there was absolutely no respiratory response. Suspecting that intracranial pressure was the cause of the respiratory failure, trephining was proceeded with and about 5 oz. of pus evacuated from an abscess in the temporo-sphenoidal lobe, but without the slightest return of the respiratory function, even though artificial respiration was maintained for an hour and a half longer.

TWO CASES OF ANKYLOSIS OF THE LEFT TEMPORO-MANDIBULAR JOINT.

BY

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THESE cases were encountered in the out-patient department of the Queen Street Hospital for Sick Children. In both the condition was of long duration (seven years and twelve years), had followed a serious illness, had produced a most inconvenient deformity, and was completely relieved by removal of the head and neck of the mandible.

The first problem in dealing with a case of long-standing ankylosis of the jaw is to determine whether the obstruction is articular or extra-articular, and on which side it lies. In both these cases it was only after many weeks of insertion of wedges that sufficient movement was obtained to enable one to palpate movement in the right joint and complete absence of movement in the left joint.

The second problem is one of anaesthesia. The jaw being fixed in the closed position one would be unable to control the tongue or to remove secretions or stomach contents from the pharynx, so that it was decided to expose the joint under local anaesthesia and to remove the bone under general anaesthesia.

Thirdly, one had to decide the nature of the operation, and as the obstruction appeared to be due to an ankylosis at the left temporo-mandibular joint, it was decided to try the effect of removing the head and neck of the mandible on the left side.

The result in both cases is very satisfactory, and the patients can eat in a normal manner. The movement obtained at operation has been maintained up to the present—

Necropsy.

A limited *post-mortem* examination disclosed a connexion between the abscess cavity in the left temporo-sphenoidal lobe and the temporal fossa, as the great wing of the sphenoid was found to be perforated by a small hole admitting the point of a probe. This was independent of any of the normal anatomical foramina and was apparently at a point where the bone is usually very thin. The mastoid cells contained pus.

Professor Howden has since called my attention to a skull (macrated) in which the great wing of the sphenoid is actually perforated in the centre of a very thin area. Another point of interest found at the *post-mortem* examination was the inclusion within the large abscess cavity of two small globular abscesses—pus contained within firm walls—which were practically floating free in the larger cavity. It was concluded that there had been several septic foci with abscess formation and that the more rapidly advancing softening process had surrounded and isolated the earlier small collections.

in the one case for two and a half years, in the other for two and a half months.

CASE I.

A girl who at the age of 2 was ill with consumption of the bowels for fourteen weeks. Subsequently an inability to open the mouth was discovered, which persisted up to the age of 9, when she was brought to the out-patient department.

When first examined the mandible was immobile and the upper and lower teeth were in contact. A gap between two upper teeth permitted small portions of solid food to be pushed into the mouth with the finger. Speech was not affected, and the child was intelligent and fairly well nourished. After some weeks of daily insertion of a wooden wedge a slight amount of mandibular movement was obtained, and it was then discovered that the right head of the mandible moved whereas the left was immobile.

Operation.—Under local anaesthesia a skin incision was made along the left zygoma and then downwards in front of the ear; the zygoma was detached and turned downwards with the masseter, and the coronoid process was removed. Under general anaesthesia the head and neck of the mandible were exposed and removed.

After-Treatment.—After operation five-eighths of an inch of movement was possible. For some months the daily insertion of a gag by the father prevented this movement being lost.

Result.—The patient was examined two and a half years after operation and no diminution in the amount of movement had taken place. The child has a better colour than previously, can eat and drink normally, and her parents are well satisfied with the result. The teeth are growing in a very irregular manner.

CASE II.

A girl who had had scarlet fever at the age of 2½ and measles three months later. Inability to open the mouth was noticed after the scarlet fever, and since then the mandible had remained immobile and only liquid food could be taken.

At the age of 12 the patient was brought to the out-patient department, and one found immobility of the mandible with the upper and lower teeth in contact. The upper incisors lay anterior to the lower incisors, leaving a cleft through which fluids could be sucked.

After many weeks' treatment with wooden wedges and screws slight movement was obtained, and palpation revealed movement at the right temporo-mandibular

joint and complete immobility at the left temporo-mandibular joint. **Operation.**—This patient was not so docile as the first, and after the skin incision general anaesthesia had to be adopted. The skin was incised along the left zygoma and downwards in front of the

FIG. 1.—Case I. A, Before operation: patient attempting to open the mouth; note the teeth in contact. B, Some months after operation; the mouth can now be freely opened.

FIG. 2.—Case II. A, Before operation: patient attempting to open the mouth. B, after operation; the mouth can now be freely opened.