CASE OF SALIVARY CALCULUS IN WHARTON'S DUCT.

GAYLORD C. HALL, M.D.

LOUISVILLE, KY.

Salivary calculi are sufficiently rare to justify reporting the following interesting case:

History.—C. A. P., aged 22, consulted me Aug. 4, 1907, giving the following history: Trouble began five years previously with pain and swelling on right side of face and neck about angle of jaw. This disappeared by use of astringent washes in a few days. From that time up to one week ago he had always had slight swelling at angle of jaw on right side and some tenderness at all times. This quiescent stage would be interrupted by attacks of swelling and pain which, while always relieved by simple measures, had of late been increasing in number and severity. Patient could offer no explanation for his condition. There was no history of injury and his previous history was negative. Patient was otherwise in good general health. The present attack commenced one week before I saw him, attended by considerable pain and swelling. Pain on pressure was acute and he was unable to lie on the right side. He had been treated by his family physician with applications, without relief.

Examination.—This showed a large swelling at angle of jaw several inches in extent and very tender on pressure. The swelling extended inward to floor of mouth, the mucous membrane of which was very red and painful on pressure. Patient complained of pain on swallowing or talking and speech was thick and indistinct. Breath was foul and his temperature was 100 F. and pulse 96. The course of Wharton's duct could be seen as a tense cord, its mouth bulging and discharging pus. By passing finger along duct considerable pus could be milked out especially after I had enlarged the mouth of the duct by slitting it with a canaliculus knife. The patient obtained considerable relief after pus was thus removed and this was all that was attempted at that time. He was given a purgative and an antiseptic mouth wash and told to report next day. Next day all symptoms and findings were exaggerated so it was decided to widely expose the affected tissue.

Treatment.—At one point a hard swelling that was extremely painful on pressure could be felt about one inch from the mouth of the duct, so it was decided to open it at that point. Suprarenalin-cocain was employed and complete anesthesia was obtained with practically no hemorrhage. After making an opening about one-fourth inch in depth considerable pus was discharged and the swelling at the angle of the jaw diminished. On searching in the bottom of the pocket thus disclosed a hard rough substance was felt that was extracted with some little difficulty by a ring curette. Pressure at angle of jaw resulted in a still further discharge of pus and the swelling practically disappeared. No attempt was made to close the cavity thus formed, but the edges were trimmed away that it might remain open. Healing was very rapid, taking place in about three days. All symptoms were relieved except for a slight induration at the angle of the jaw.

The calculus removed is 1.5 cm. ($\frac{5}{8}$ inch) long, 0.3 cm. ($\frac{1}{8}$ inch) thick and weighs 0.26 gm. (4 gr.) The surface is rough and slightly irregular. It is spindle shaped as such concretions usually are.

Patient reported August 18, and saliva is being discharged through natural opening.

The case is one of interest, first, from its unknown etiology; second, from its long duration—five years; third, because of the final infection with abscess formation, and fourth, from the prompt subsidence of all symptoms after operation.

The literature on this subject is extremely scanty, so that a short synopsis of the chief characteristics of these concretions may not be amiss. The stones are composed chiefly of calcium phosphate, with some carbonate and about 5 per cent. of organic matter. They are al-

ways of inflammatory origin, according to Kroiss,¹ and traumatism, foreign bodies and glandular secretion play secondary rôles. Kroiss believes that streptococci are the causative elements in the formation of the stones, though the leptothrix² has been found. In size they vary from fine sand up to, in Puzey's case,³ a weight of 7.6 gm. They are commonest in the submaxillary gland and duct, the shape taking the form of the duct in which it lies—being usually spindle-shaped. The early development is unnoticed and usually painless. It is only where obstructive symptoms occur that the swelling, pain and interference with mastication and speech arise. Suppuration is a frequent complication in the later stages and the pus may be discharged through the mouth or externally.

When the stone can be felt in the duct the diagnosis of course, presents no difficulties, but when by repeated inflammation it becomes surrounded by a hard mass of fibrous tissue, when it is imbedded in a foul fungating mass or when the duct is distended to form a ranula the diagnosis may be exceedingly difficult or impossible until an exploratory incision reveals the condition. The condition is to be distinguished from ranula, dermoid cyst and malignant growth, but except as mentioned the diagnosis is usually not difficult. A ranula is distinguished by its tense, thin-walled, semitranslucent, fluctuating appearance as well as by its bluish color. A dermoid cyst is more doughy to the touch, pits on pressure, has often a yellowish color. Projects below the chin in the median line. Is painless unless inflamed.

A calculus can be mistaken for a malignant growth only where a large hard mass presents itself or where the calculus is imbedded in a fungating mass of tissue with foul odor due to continual discharge of pus through the fistula. In this condition incision clears up the diagnosis. The treatment is, of course, operative, preferably through the mouth under local anesthesia and extraction of the concretion with a scoop. No after-treatment is, as a rule, required except simple cleanliness.

Butlin³ says: "An external incision is only called for in order to excise the outer portion of the submaxillary gland. The incision should run well under the ramus of the jaw, and a ligature be placed at the junction with the inner portion of the gland and Wharton's duct in order to avoid a mucous fistula."

CONCUSSION OF THE BRAIN SIMULATING CEREBRAL HEMORRHAGE.*

CARROLL W. ALLEN, M.D.

NEW ORLEANS.

The following case of concussion of the brain furnishes an interesting clinical history and instructive operative findings:

History.—M., male, aged 25, jockey by occupation, fell from his horse in a hurdle race and it is supposed was kicked in the head. Admitted to hospital March 7.

Examination (ambulance notes).—When first seen the patient was unconscious, respiration stertorous, pulse full, slow and bounding; reacted to painful stimuli on either side; pupils were moderately dilated and unequal; right corneal reflex slower than left. The face was congested and there was a lacerated wound of the scalp over the right parietal bone. On

* A contribution from the surgical clinic of Tulane University.

1. Beitr. klin. Chir., xlvii, 2.

2. Alexander: Revue de Chir., 1906.

3. Butlin: Diseases of the Tongue, Second Edition.