

fluctuation may be elicited. In the writer's case, however, the tumor was quite hard and elastic to the feel. Percussion will give complete dullness.

When the surgeon is in the presence of a true cyst of the canal of Nück, the tumor will be absolutely irreducible because the fluid is encysted. Sometimes, however, the tumor may be reduced *en masse* into the abdominal cavity, but it will immediately return to its former position as soon as pressure is removed. On the contrary, if the tumor is a congenital hydrocele, that is to say, a cyst developed in an unobliterated canal of Nück, it can be reduced by pressure or by simple dorsal decubitus. It is in these cases that the diagnosis is sometimes very difficult, and a very careful examination is necessary in order to decide whether we are in presence of a hernia or a simple cyst. However, the percussion, dullness, the ease of reduction (which is progressive and causes no gurgling sound when the sac slips into the abdominal cavity), the transparency of the tumor (which in some cases is quite distinct), are sufficiently good signs of hydrocele, if they are to be found.

There is no impulsion given to the tumor when the patient coughs, and in certain cases the cyst is more liable to retract. The contents of these cysts are usually clear and limpid, but may, however, present the characteristics of a hydro-hematocoele, or even a true hematocoele.

Generally speaking, the functional signs are of little importance, as the patients rarely suffer from their tumor, even when it has attained a considerable size. The evolution is usually very slow, and the surgeon will rarely see the patient when the tumor is still small. It is only after it has reached a certain size, producing considerable inconvenience, that the patient will ask for an operation.

A condition of affairs that has been observed in several cases is acute inflammation of the cyst, which may produce accidents similar to those occurring in strangulated hernia, and some surgeons have operated on such cases supposing they were in presence of a hernia, and have been much astonished when they cut down and found a simple cyst.²

The diagnosis of this affection would appear to be quite easy; but in reality it is not so, and many mistakes have been mentioned by various authors. The principal affections which are to be taken into consideration are cysts of the labium, hernia, hernia of the ovary, varicose veins of the round ligament, lipoma of the labium, dermoid cysts of the skin, fibroma or fibromyoma of the round ligament, as well as sarcoma, although the latter affection is extremely infrequent in this region.

Regarding the treatment, the writer has little to say. It naturally consists in an extirpation of the cyst and ligature of its pedicle. This, of course, applies to the true form of cysts of the canal of Nück, in which no communication exists between them and the peritoneal cavity.

Puncture, and removing the fluid, followed by an irritating injection, would naturally be bad practice, and is only mentioned here to be condemned.

² Mr. Wm. Thomson (Dublin Journal of Medical Science, December, 1896) relates a case of supposed strangulated labial hernia. The patient was admitted, suffering from symptoms which suddenly came on. There was a lump in the groin which had suddenly become larger, painful and tense; then followed vomiting and prostration. The tumor extended from the external abdominal ring into the left labium. Incision showed that the tumor was a cyst of the canal of Nück.

GOLD FOIL IN CEREBRAL SURGERY.

BY H. H. A. BEACH, M.D.

It is now nearly seven years since I published¹ an account of an operation undertaken June 11, 1889, at the Massachusetts General Hospital to remove the source of irritation in a case of epilepsy. The patient was a young girl and the disease had existed for eight years, following a compound comminuted fracture of the skull at the parietal eminence of the left side. The steady increase of convulsions and the progressive mental deterioration made almost any condition preferable to the future toward which she was drifting. The operation was determined upon without much hope of its affording permanent relief; and consisted of a removal of the soft parts covering the fractured area, and a careful dissection of the dense cicatrix from the bone until the brain was liberated from its anchorage. The removal of fragments at the time of the original injury made trephining unnecessary. The protruding cicatricial tissue was dissected from the brain until the latter seemed to the touch, of normal consistence. The lacerated dura was included in the cicatrix. In the course of this dissection a projecting spicula of bone which had grown from the fractured border of the skull toward the brain was removed, also a small cyst, containing a clear fluid. The wound was closed with sutures, and recovery was uneventful and complete.

A report of the case was delayed for ten months lest the convulsions should recur. The causes of irritation presented by the wound, were the spicula of bone, the cyst, or the rigid attachment of brain and bone by cicatrix, singly or jointly. The latter limited the accommodation of the brain to head movements or skull concussions and favored the direct transmission of any force applied to the skull toward the point of suspension.

In anticipation of a recurrence of convulsions through a new adhesion to the bone I made the following provision in the report of the case: "Should it become necessary to repeat the operation described, it has occurred to me that a sheet of very thin aseptic gold foil might be left between the surface of the brain and the external flap—its ductility should theoretically adapt it easily to any pressure. Being non-corrosive and easily made aseptic, it offers the best and least irritating barrier to adhesion, that through traction might cause irritation of the brain. It furnishes a solution for a possible difficulty, and no objection to its use occurs to me."

For fifteen months the patient was free from convulsions. Then while stepping down from a wagon her dress caught upon the iron step and she was thrown violently to the ground, her head striking upon the site of the old injury and operation. Convulsions began at once, and continued with varying frequency each day until she entered the hospital again for treatment in the spring of 1892.

Bromides were used but with a negative result. The old wound was again opened; and, as before, a tough cicatrix was found firmly uniting the brain and bone. A careful dissection separated them and removed the cicatricial tissue from the brain as at the first operation. The finger could then be swept around and within the entire circumference of the skull opening. To prevent re-adhesion a plate of

¹ Boston Medical and Surgical Journal, April 3 and 10, 1890.

sterilized gold foil (No. 60, Dental) enough larger than the opening to be retained in place against its bony edge by the pressure of the brain from beneath, was inserted, constituting a metallic dura-mater. The skin flap was turned back to its place covering the foil, and sutured. Rapid healing followed, with no evidence of local or constitutional irritation. The patient was exhibited at the annual meeting of the American Surgical Association, June 1, 1892.

After the second operation the convulsions occurred frequently for the following year, but with diminished intensity and much irregularity. They were more frequent at the menstrual period and after over-indulgence in eating. By the following October a favorable change had been noted by her family, which continued to June, 1894 (two years after the second operation), when the seizures had become light and were with few exceptions limited to the menstrual periods. She had become interested in household duties, and attended to them in a manner most satisfactory to her family. One year later she is reported as better in every way. Has had only one slight seizure since January, and in that time performed the duties of nurse for two members of her family in addition to the household work for three others. Her general intelligence, memory and capacity have deeply impressed those most interested in her and she has become less irritable and headstrong.

This general improvement has continued to the present time, and in other directions. She had a number of convulsions for one day in March, 1896, followed by an hysterical condition for a few days; then she is reported as well as usual for nine weeks, when she had a light seizure. Again, in August, she had three in the night (the last reported). Both of the later attacks were associated with the menstrual period.

Time alone can settle the permanency of the relief in this case the report of which has been delayed five years lest the apparent gain should be reversed. If the rigid adhesion of the brain to the bone was the primary source of the convulsions, it is reasonable to believe that the prevention of such adhesions should operate toward their relief. The adoption of a gold plate for that purpose was the result of necessity, for nothing else promised so much. While it is yet impossible to determine the value of the principle, owing to the limited number of operations where it has been used, no unfavorable reports from its employment have been reported. The recorded cases are encouraging in the direction of a procedure that, without delaying union or adding to the common risks, protects the brain from injury and protrusion during and after healing, and provides against such well-recognized sources of brain irritation as the adhesions that may follow any case of compound skull-fracture or its equivalent by operation.

Since this patient was first exhibited to the profession in 1892, the subject has had the kind interest of Drs. Weir, Abbé and Gerster of New York, Keen of Philadelphia, Roswell Park of Buffalo, Tiffany of Baltimore, and Oliver² of Cincinnati, who had the opportunity of examining a case post-mortem. He found upon examination of the wound that the gold plate was in position, and that it had accomplished the purpose for which it was inserted, the prevention of adhesions. Estes, of Bethlehem, Pa., makes a report of

three most interesting and successful cases where the foil has been used to replace the dura and prevent the escape of brain tissue.³ Sachs and Gerster, in their analysis of 19 cases, state that "the only method known to us at the present time, to avoid the formation of these scars is the introduction of some pliable metal plate between the dura and the skull."⁴

Medical Progress.

REPORT ON PROGRESS IN THORACIC DISEASES.

BY GEORGE G. SEARS, M.D.

SHOULD CONSUMPTION BE TREATED IN A GENERAL HOSPITAL?¹

APROPOS of three cases of pneumonia treated in his wards, each of whom ultimately died of phthisis, Jaccoud raises the question whether consumption ought to be treated in the wards of a general hospital. In each instance the pneumonia was the result of an injury, and occurred in previously healthy persons without tubercular taint. Although carefully looked for, the tubercle bacillus was not found. The disease ran a favorable course; but shortly after recovery all three patients showed signs of phthisis, to which they finally succumbed. At the autopsy there was nothing to show that the tubercular infection was not of recent date; yet the question must remain unsettled as to whether the bacilli were dormant in the tissues of the patient during health and were started into activity during the progress of the pneumonia, or whether these cases were infected by other phthisical patients in the same ward. In the absence of proof the latter should not be affirmed, as he is convinced that non-phthisical patients can be protected by proper hygienic regulations, which are also essential for the safety of the consumptives, who unquestionably suffer to a considerable extent from the presence of other organisms in the wards. The most important hygienic element is the suppression of dust.

THE PRODUCTION OF PLEURAL EFFUSION.²

Leathes and Starling give details of experiments to determine the cause of the pouring out of fluid into the pleural cavities, and say that if it is permissible to apply these data directly to the explanation of clinical phenomena they may formulate the following conclusions:

(1) So long as the vessels are healthy no change in the pressure of the blood in the capillaries supplying the pleura is able to bring about pleural effusion.

(2) In the hydrothorax of heart disease we have probably the concomitant working of several factors, that is, the raised capillary pressure, and in many cases a certain amount of hydremic plethora. These, however, are acting in the capillaries which are suffering from malnutrition, and are therefore in a subinflammatory condition. There is at the same time an impediment to absorption in the obstruction to the flow through the thoracic ducts caused by the venous engorgement.

¹ Bull. de l'Acad. de Méd., February 11, 1896.

² Journal of Pathology, 1896, iv, p. 175.

³ Loc. cit., April 1, 1896.

⁴ American Journal of Medical Sciences, October, 1896.

² Journal American Medical Association, May 30, 1896.