that could be desired. It may be used as a mouth wash or gargle, is not unpleasant in taste, and is non-poisonous in its effects on the system.

LACTIC ACID AND DIET IN INFANTILE DIARRHŒA.

FRANK WHITEFIELD SHAW (*N. Y. Med. Journ.*, 1888, xlviii. 123), following the rules laid down by Hayem, has been employing lactic acid in the green diarrhœa of infants. He has also extended its application to all forms of infantile diarrhœa, and with excellent results. Since 1887 he has administered this treatment to over 100 patients, varying in age from ten weeks to twenty-four months, and with great variety in the intensity of the disease. A child under twelve months received one-half a teaspoonful of a two per cent. solution every hour; or if the discharges are very frequent, a teaspoonful every hour for six doses, and then a half a teaspoonful every hour. Over twelve months, a teaspoonful is the ordinary dose. Within a period of twelve to seventy-two hours the character of the alvine discharges begins to change; the greenish becoming less watery and assuming a yellow tint, and the yellowish watery, or the bloody passages assuming a greater consistence without the offensive odor. The general results were so satisfactory that the author has abandoned all other drugs in this disease. Under its use also vomiting is controlled, temperature reduced, intestinal pain quieted, and restlessness and sleeplessness overcome.

As most of the patients treated were of the poorest class, he gave special attention at the same time to a proper regulation of the diet. An exclusive diet, either of breast milk or of artificial food, did not seem to give good results. Food too rich in fat cannot well be tolerated, and as mother's milk is sometimes open to this objection, a small quantity of the prepared food was administered before nursing. The proportion of caseine, too, was rendered smaller thereby, and when lactic acid was also employed as the medicine, recovery was usually speedy.

SURGERY.

UNDER THE CHARGE OF

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TRAUMATIC APHASIA RELIEVED BY THE REMOVAL OF A BLOOD-CLOT FROM THE CEREBRUM.

BALL (*Dublin Journal of Medical Science*, September, 1888) records a case of peculiar interest successfully operated on by him for the cure of aphasia. The patient had been struck a blow in the head with a penknife ten days before admission to the hospital. He had noticed, since the blow, increasing difficulty in using the right words. On examination a small scab was found

adherent to the scalp, over the squamous portion of the left temporal bone. This, when detached, showed a cicatrix extending deeply through the temporal muscle. There was well-marked motor aphasia, word-blindness, and word-deafness. No paralysis could be detected. Five days after admission, as the symptoms had increased, an operation was determined on. A flap was turned down including the cicatrix, and a wound at the squamous portion of the temporal bone, such as could be caused by the small blade of a penknife, was found. A circle of bone was removed, containing in its centre the wound in the bone. The knife was found to have penetrated the dura mater and brain. The dural wound was enlarged and a Sims' forceps was passed into the brain wound, and was gradually separated. A dark-colored blood appeared and was extruded by the internal brain pressure; more clot was removed by Sims' forceps and weak perchloride irrigation, a drainage tube was introduced, and the external wound was sutured. On the evening of the same day the patient carried on a long conversation with very few mistakes in his selection of words. The following morning aphasia was again increased, but disappeared on cleaning the blocked drainage tube. The recovery was, after this, uninterrupted and complete.

TRAUMATIC SUB-DURAL ABSCESS OF THE BRAIN.

STOKES (*Dublin Journal of Medical Science*, September, 1888) alludes to eleven recorded cases of sub-dural traumatic abscess treated by trephining, with successful issue in five. He also records two cases operated on by himself, in the first of which the abscess was not reached and the patient died. In the second the abscess was only found by sinking a hypodermatic needle to its whole depth into the brain substance. An ounce and a half of pus was removed, and the abscess cavity was washed out with a one per cent. solution of carbolic acid.

In connection with these cases Stokes makes the following propositions:

1. That after the primary symptoms of cerebral traumatism have subsided, there is frequently a latent period of varying length during which there are no distinct brain symptoms connected with abscess formation whatever.
2. That their appearance is, as a rule, sudden, and, if uninterfered with, run a rapidly fatal course.
3. That the occurrence of pus production resulting from cerebral traumas is not incompatible with a perfectly afebrile condition.
4. That this latter fact will probably aid in differentiating traumatic cerebral abscess from meningeal or encephalic inflammation.
5. That both as regards color and consistence there is great variety in the contents of cerebral abscess cavities, and that, as shown in Wilm's case, published by Rose, of Berlin, they may be transparent.
6. That antisepticism has largely diminished the risks of the operation of trephining.
7. That having regard to the great mortality of cases of cerebral abscess when uninterfered with—viz., from 90 to 100 per cent.—the operation is indicated even when the patient is *in extremis*.
8. That in the case in which the trephine opening does not correspond to the situation of the abscess, exploratory puncture and aspiration may be employed.

9. That by the adoption of this measure the necessity for multiple trephine openings can be largely obviated.

10. That the employment of a blunt-pointed aspirating needle, as suggested by Rentz, is probably the safest mode of exploration and excavation.

11. That drainage is desirable in the after-treatment of such cases.

12. That both during and subsequent to operative interference in these cases a rigid antisepticism is imperatively required.

SPLENECTOMY.

Two cases of splenectomy, performed by Fritsch, are reported by ASCH (*Archiv für Gynäkologie*, Bd. 13, Heft 1).

1. Married woman, æt. thirty-one, has menstruated regularly since her eighteenth year till the middle of May, 1887. Since the second week in March has suffered slight pain in the region of the spleen, and has felt a small nodule beneath the lower border of the ribs. For this and loss of appetite she consulted a physician. Examination showed a moderate enlargement of the spleen, without noticeable change in other organs. Together with increasing languor and complete anorexia there was a steady increase in the size of the tumor.

Admitted to the hospital June 20, 1887. Present condition: small, feeble woman, of moderately anæmic appearance. Thoracic viscera normal; abdomen projected on the left side by a firm movable tumor, extending from the left nipple line two and two-fifths inches below the border of the ribs, to the linea alba, midway between the umbilicus and symphysis; about nine inches in length, in the form of a bean, convexity outward, notched at its upper third. Uterus somewhat enlarged, slightly retroverted, movable, with virginal but patulous os. Blood normal; no disturbance in the proportion of white to red corpuscles. From the rapid growth of the tumor and the healthy condition of the organs, the diagnosis of neoplasm of the spleen (probably sarcoma) was readily made. The condition of the womb indicated pregnancy in its first month.

After the customary preparation for laparotomy, the operation was begun by a four-inch incision in the linea alba, beginning two inches above the umbilicus, and sweeping around the latter to the left. The tumor, dark blue-red in color, had formed no adhesions and was slowly pressed from the abdominal cavity. The pedicle was formed by the two layers of the gastro-splenic omentum investing the vessels. The tail of the pancreas was in close relation to its upper part. The pedicle was transfixed by a needle carrying a double silk thread, tied in two sections, and cut two-fifths of an inch peripherally to the ligatures. The two omental leaflets were then united by a continued suture, and the whole pedicle finally included in a ligature, leaving a small but well-fortified stump. This was coated with iodoform, returned to the peritoneal cavity, and the abdominal wound was closed by means of deep silk sutures and an occlusion bandage. The operation lasted twenty-five minutes.

The case ran an apyretic course; the wound healed by primary intention; the patient was discharged cured in less than three weeks from the time of operation. There was slight swelling of the inguinal and axillary glands, but no enlargement of the thyroid. The examination of the blood showed it to

be normal. The patient complained of a dry throat and some cough. Her pregnancy ran a natural course, and terminated in the birth of a dead child, which one month before had been living. The patient had felt no motion for eight days previous to delivery. Both fetus and after-birth were extruded with extraordinary ease, and convalescence was rapid and uninterrupted. The cough and the pain in the left side, of which the patient had previously complained, left her; her appetite increased, and she is now in perfect health. The tumor weighed five and a half pounds, and proved, on microscopical examination, to be a lympho-sarcoma.

2. Woman, æt. twenty-six; delivered of a healthy child at full term, February 4, 1887. On the fifth day the patient left her bed, but felt from that time increasing languor and weakness. In spite of a good appetite and the ingestion of an abundance of nourishing food, the patient became rapidly pale and emaciated. Fourteen days after delivery a painful nodule was observed in the splenic region, which rapidly increased in size. There was pain, becoming more acute for a time, but gradually diminishing till in five weeks it entirely disappeared. The nodule, however, grew with great rapidity. After a period of fruitless treatment with quinine, iron, and other medicines, an operation was determined upon. Examination showed an exceedingly large tumor of the spleen. The whole abdominal region of the left side from the ribs to the pelvis was taken up by the smooth, hard swelling. Dulness on percussion began a hand's breadth above the lower border of the ribs, and extended toward the right as far as the ensiform cartilage, downward to the navel. A deep notch could be felt a finger's breadth above the navel, in the inner border of the growth. The patient was extremely blanched and emaciated; the pulse was rapid; there was some dyspnoea. No abnormality of any organ except the spleen; no glandular enlargements; no tenderness over the sternum or any other bone; no hemorrhage; no disturbance of vision; menstrual flow slight but regular. Patient complained of great giddiness, constant pain in the head, shaking and shivering of the bones, and extreme exhaustion on the slightest effort, but suffered principally from shortness of breath, and the mechanical burden of her tumor. On examination of the blood the relation of white to red was as nine to eight. The patient insisted upon an operation, although medical treatment had produced a distinct gain in strength and general condition.

Incision in the middle line six inches long; an adhesion to the parietal peritoneum. The tumor was carefully pressed from the abdominal cavity, a slight intestinal adhesion was ligatured and tied without loss of blood, the moderately broad pedicle was ligated in several portions, and, four-fifths of an inch peripherally to the line of ligature, the tumor was cut away. The stump was carefully examined, included in a final ligature, and returned to the abdominal cavity. No bleeding could be observed, either from the stump or from a small surface lying near it, where the spleen had been adherent. The hæmostatic forceps placed on the bleeding points of the abdominal wound were removed without a recurrence of hemorrhage, and after a few minutes' observation the incision was closed by deep sutures, placed closer than usual, and a very tight occlusion dressing. No symptoms of danger for four hours, when the patient became rather suddenly short of breath; the pulse was 96 to the minute, and moderately full. No blood was found on the dressings.

The dyspnoea progressively increased till the respirations became gasping, and the patient perished five hours after the completion of the operation. The pulse was never above 100 to the minute, and was, in relation to the other signs of anæmia, surprisingly full.

The extirpated spleen weighed sixteen pounds, and presented the typical picture of leucæmic hypertrophy.

Autopsy. A large coagulum in the subcutaneous connective tissues about the wound. Peritoneal cavity filled with reddish-brown blood. About the former position of the spleen numerous scattered sub-peritoneal hemorrhages. Similar effusions into the great omentum.

Of 90 splenectomies, tabulated by Asch, 51 were successful. The majority of these successful cases were for prolapse. Fourteen times the operation has been successfully performed for the cure of wandering spleen, three times for cystic degeneration, twice for sarcoma, four times for hypertrophy of the spleen, once for echinococcus cyst, once for leucæmic enlargement.

The thirty-nine unsuccessful cases were all subjected to operation for the removal of large splenic tumors. Twenty-one cases were leucæmic. There is more or less probability that the other unsuccessful cases were not leucæmic. Death occurred in most of these cases within a few hours of the operation. The cause of death was, with one exception, extensive bleeding.

From this table it would appear that for various diseased conditions of the spleen extirpation is safe, easy, and justifiable, but that leucæmic enlargement should constitute a distinct contra-indication to the operation. To this opinion Asch does not conform. The danger of leucæmic hypertrophy rests on its bulk, and operations should be undertaken early in these cases. The rule should be, "if it is decided to remove a spleen, whether it be leucæmic or diseased in other ways, an early operation must be advised."

REMOVAL OF CARCINOMATOUS TONSIL BY EXTERNAL INCISION.

FOWLER (*Brooklyn Medical Journal*, vii. No. 9) reports a case of primary carcinoma of the tonsil removed by external incision.

Mrs. L., aged sixty-seven, suffered for nine months from an enlargement of the left tonsil, which interfered with deglutition. Two cousins had died of breast cancer. On examination a lobulated slightly movable growth the size of an English walnut was found, occupying the site of the left tonsil. Lymphatic enlargement beneath the posterior border of the sterno-mastoid. Pain, aggravated by swallowing.

EthORIZED. Head extended and turned to the right. Incision from just below the lobe of the left ear down along the anterior border of the sterno-mastoid to a point slightly below the level of the hyoid bone. To the lower extremity of this incision was carried another, beginning midway between the angle of the jaw and the symphysis menti. The flap was drawn up. External jugular tied and divided; the facial and lingual arteries treated in the same way. The hyoid attachment of the stylo-hyoid was divided, the muscles and other structures retracted, the tumor pressed outward by the fingers passed into the mouth, and all diseased tissues removed by means of the galvano-cautery. The incision was now prolonged backward, the enlarged lymphatics, some of them adherent to the sheath of the common carotid,

were shaved away, and the wound was drained, sutured, and dressed. Healing was, in the main, by first intention. The patient was entirely relieved of her dysphagia, and she suffered from no recurrence of the disease *in situ*, though she finally perished from gastric cancer.

For the performance of external pharyngectomy Wheeler makes an incision from the greater cornu of the hyoid bone to the hyoid cartilage, ligating the superior thyroid artery.

Gussenbauer makes an incision from the ear to the greater cornu of the hyoid. Finding the posterior belly of the digastric, the parts beneath and back of it are divided into the maxillary region.

Weil and Mikulicz make an incision three and a fifth inches long behind the ascending ramus of the inferior maxillary bone, including the parotid gland if necessary. The facial nerves should be spared. The cut is continued along the lower border of the body of the jaw, a double ligature being thrown around the lingual and facial arteries.

Langenbeck, in 1879, opened the pharynx by making an incision beginning midway between the symphysis and angle of the jaw and running downward and outward to the thyroid cartilage; the incision was deepened, and bleeding prevented by tying the vessels before they were cut; if necessary, the hyoid attachments of the stylo-hyoid and digastric were divided.

Cheever incises along the lower border of the body of the jaw, and saws through the inferior maxilla in front of the masseter. The hyoid muscles are divided, the bony fragments are pulled apart, and the tonsil is pushed outward from the pharynx.

Kuester makes an incision beginning at the corner of the mouth, carried back obliquely in front of the insertion of the masseter and thence to the sterno-mastoid. The bone is sawed in the direction of this incision.

Langenbeck divides the cheek through its entire thickness downward and backward from the angle of the mouth to the lower border of the jaw in front of the masseter muscle; from this point the incision curves backward under the jaw to the sterno-mastoid. The jaw is sawn through in the direction of the incision.

THE TREATMENT OF CLUB-FOOT.

HEINERES's method of treating club-foot is presented by GRASER (*Beilage zum Centralblatt für Chirurg.*, No. 24, 1888) as completely successful in the most marked cases.

Briefly, the method consists in forcible reduction of the deformity, and fixation by means of a plaster bandage. Section of the tendo Achillis is condemned as removing an important aid in the correction of supination and adduction. The first dressing may accomplish very little; subsequently the tissues are more yielding and distinct progress is made by each manipulation. The treatment lasts from six months to a year and a half, according to the difficulty of the case, and is only completed when, on standing without the bandage, the foot rests in complete pronation and dorsal flexion. When this stage is reached further treatment is superfluous.