both tibialis anticus and posticus, a condition of cavus presents.

I believe that painful heel usually is produced in those cases in which Shaffer's foot exists to a slight extent and the plantar fascia, instead of becoming weakened and lengthening throughout its extent, has given way at its attachment to the calcaneum.

In the history of these cases I have not been able to discover anything which pointed to a particular traumatism. It would seem to be the slight strain of each step rather than sudden evulsion or rupture. This theory readily accounts for periostitis, neuroma, ostitic growths and bursitis as complications and explains why they have been frequently cited as etiologic factors.

TREATMENT.

Treatment should be directed to the original cause and relieving the acute symptoms. Shaffer's foot can only be cured in one way, i. e., by elongation of the gastrocnemius. This is most satisfactorily accomplished by the use of Shaffer's traction shoe. The pain may be partially relieved by a steel arch so constructed as to remove the strain from the plantar fascia until the movements at the ankle are again normal. Operations for the relief of the symptoms by cutting down on an inflamed periosteum or bursa or the removal of an ostitic growth or a neuroma are seldom necessary. Cutting a depression in the sole of the shoe, prescribing rubber heels and such means having for their object the relief of pressure are misdirected. Immobilization in plaster of Paris, electricity and ointments are useless, while the traction shoe, the properly constructed steel arch and directions as to the proper method of walking are almost sure to afford relief and effect a cure.

CASE REPORT.

A recent case was so typical that I use it as an illustration.

History.—The patient was a policeman, with good general health and no constitutional diseases. For eighteen months he had had a sore heel. It came on gradually, but had been so severe as to make him limp slightly for nearly a year and a half. He had been treated for rheumatism, for flat-foot, for diseased bone, and for inflammation of the covering of the bone. He had had prescribed internal remedies and external lotions, steel arches (many patterns), rubber heels, and felt inner-soles, with a depression beneath the tender spot. He had had electricity, a variety of currents, and had the foot in a plaster-of-Paris cast for about three weeks. None of these measures had afforded him more than a fleeting relief, and he had been urged to have an operation.

Examination.—This showed a spot of acute tenderness over the inner part of the posterior attachment of the plantar fascia. The left gastrocnemius was normal, or nearly so, but the right, the one having the painful heel, limited flexion of the foot to 95 degrees with the leg. There was no deformity of the foot. No tumefaction of any kind could be found. A radiograph was negative.

After careful experimenting it was found that the greatest pain was experienced as the leg reached its greatest flexion on the foot in walking. In this position the strain on the plantar fascia is the severest.

Treatment.—Using the antero-posterior traction shoe daily for two weeks, and then every other day for two weeks more, elongated the gastrocnemius so as to permit of flexion to about 85 degrees. Insoles were ordered and altered a number of times before the correct shape was obtained. By gluing on to the plate pieces of leather, which could be shaved down and built up as desired, the model for the final plate was obtained. The result is the absolute freedom from pain on walking, the first time in a year and a half.

TRYPSIN TREATMENT OF A CASE OF MALIGNANT DISEASE,

INVOLVING THE LEFT TONSIL, BASE OF TONGUE AND EPIGLOTTIS.

JAMES T. CAMPBELL, M.D.

Professor of Otolaryngology and Laryngology in the Post-Graduate Medical School, Chicago.

CHICAGO.

Patient and History.—J. H., aged 56, hotel clerk, of good family history; has had gonorrhea, but denies having had syphilis. On Sept. 1, 1905, the patient weighed 168 pounds, and about this time complained of pain over the left side of the face, which later became more manifest along the left lower jaw, in the ear, and from the occiput to the vertex. As the pain was unrelieved he had five left lower teeth and two back upper teeth extracted. He was treated at various hospitals and clinics until May 9, 1906, when I first saw him at the Post-Graduate Hospital. At that time he could not protrude his tongue and swallowed with much difficulty the smallest amount of liquid, impulsively placing his hand as though to support the lower jaw. His speech was thick and indistinct, he had left facial paralysis and complained of constant pain radiating over the face from the angle of the left jaw.

Examination.—An indurated mass was found at the left side and base of the tongue, the size of a filbert; an indurated, enlarged, firmly-fixed left tonsil; a much thickened epiglottis and ulceration in the glosso-epiglottic sulcus of the left side. The submaxillary gland of the corresponding side was large, hard and adherent. At my request he was examined by Dr. T. Melville Hardie, Dr. George Morgenthau and Dr. Frederick Besley, all of whom pronounced the disease malignant and the case inoperable.

General Treatment.—We prescribed large and increasing doses of potassium iodid. Ten days later he had a violent hemorrhage from the mouth and was taken in an ambulance to the Cook County Hospital, where he remained more than five weeks. While there mercurial inunctions were administered daily for three weeks. He returned to us on July 2 and was under observation in the Post-Graduate Hospital for three weeks. There large doses of potassium iodid were given, and the leucodescent lamp applied as a placebo; yet his condition gradually grew worse. His weight was reduced to 115 pounds, and he was taking about 4 grains of morphin daily to allay the pain. As the patient was failing rapidly and nothing better could be suggested, we determined to try trypsin injections.

Trypsin Treatment.—Aug. 25, 1906, 5 minims of Fairchild Bros. & Foster's *injectio trypsinii*, diluted with 10 minims of sterilized water, were injected under the skin over the enlarged gland, and August 28 10 minims were injected in the same region. On August 31 and September 4 15 minims were injected, and we noticed that the swollen submaxillary gland (which had enlarged to the size of a hen's egg during the course of one night, just prior to the beginning of trypsin injection), was very rapidly decreasing in size. He was swallowing more comfortably and feeling so much better that he celebrated his improvement by indulging in a ten-days spree. September 16 60 minims (one ampule) were injected, and since that time one ampule of *injectio trypsinii* diluted with two volumes of distilled water has been injected under the skin of the buttocks each alternate day. On September 18 he weighed 123 pounds, and on September 20, 126 pounds, a gain of three pounds in two days, and he has taken but one-half grain of morphin in these two days. He drinks two quarts of milk daily in addition to a diet of eggs, oysters, beef, mutton, cereals, etc. At the present time his weight is 133½ pounds. He has little or no pain and is taking no opiate. His color is good, tongue fairly clean, and the infiltrations in the tongue, tonsil, epiglottis and submaxillary region have greatly decreased. He says that he feels well and believes himself cured. For a week past *injectio amylopsini* has been given every alternate day.

Unfortunately, our early diagnosis was clinical only. Recently I removed sections from the tonsil, and the laboratory diagnosis by Professor Zeit was pronounced "infective granulomata." As infective granulomata include tubercle, lupus, syphilis, glanders and farcy, leprosy and actinomycosis, without going into details, I think we may exclude all except actinomycosis, syphilis and tubercle.

There is reasonable proof that there is no possibility of the disease being actinomycosis in the fact that there has been no tendency toward breaking down of the tumors into abscesses. Also, that in careful microscopic examinations made by Professor Zeit no ray fungi were found. For lumpy-jawed cattle large doses of potassium iodid have been given with success, and similar treatment should prove beneficial when used for human beings who suffer with actinomycosis. In the case presented, however, very large doses of the iodid were given without success and he gradually became worse.

He denies ever having had a chancre, he never had secondary manifestations of syphilis, the infiltrations never broke down, they maintained their stony hardness under persistent antisyphilitic treatment.

Against tubercle, no tubercle bacilli nor giant cells were found in the microscopic section; he has not the characteristic pallor of mucous membrane found in tuberculosis. There is no pulmonary involvement.

My belief is that the growths are carcinomatous, that what improvement has been brought about is entirely due to trypsin, and that the granular cells found by Professor Zeit are degenerated cancer cells.

In conclusion, I wish to express my indebtedness to Dr. Hugh A. Cuthbertson, to whose painstaking efforts this patient's improvement is due.

34 Washington Street.

VENTRAL HERNIA DURING PREGNANCY.

ERNEST F. ROBINSON, M.D.

KANSAS CITY, MO.

The following case is reported as a demonstration of the efficiency of "vertical overlapping" operation for ventral hernia. No severer test could be demanded than the experience of this case.

Patient and History.—Mrs. H., aged 23, was seen in consultation with her attending physician, Dr. Trexler, June, 1905. She was a little over three months pregnant, and was suffering from a hernia. About one year before, she had given birth to a still-born child. This labor, her physician told me, was very severe and prolonged, and he feared the result should she undergo a similar experience with the hernia that existed.

Examination.—A rupture at the umbilicus about the size of an orange was found, the hernial ring admitting the tips of two fingers. The hernia apparently contained omentum and at times, on straining, a knuckle of gut could apparently be felt. The contents of the hernial sac could be only partially reduced.

Operation.—Under ether anesthesia a transverse elliptical incision was made around the hernial sac, down to the deep fascia. The sac was freed from its attachments at the ring. It was opened, and the contained omentum, which was greatly thickened and adherent, was dissected free, tied off with catgut, and dropped back into the abdominal cavity. All about the ring, the fat was dissected free and a small incision, one-half inch deep, was made on either side of the ring. Then from above downward, the tissues were brought together as flaps, making the upper slip over the lower as advised by the elder Mayo. This was accomplished by inserting two mattress sutures of hemp into the edge of the lower border of the ring

and passing the thread underneath the upper border and bringing it out two inches above. These sutures held the flaps in position, but they were in addition, united by several buried catgut sutures. Thus, in place of the hernia, there existed a double layer of abdominal wall. The skin wound was closed without drainage.

Postoperative History.—Immediately following the operation, rather severe vomiting occurred, but the line of sutures held well and primary union resulted. A little less than five and one-half months later, the patient gave birth to a large, healthy child. It was a face presentation and labor was much protracted, but the line of union held firmly.

The only complaint the patient had to make was that she no longer had a navel, but was like her great ancestor, the original Adam.

A CASE OF SURGICAL EMPHYSEMA (?) OF UNUSUAL ORIGIN.

HENRY POWER, M.D.

SPOKANE, WASH.

While acting as surgeon to the Spokane division of the Great Northern Railway, I was, on July 24, in charge of a case giving the following history, part of which was furnished by officers of the wrecked train:

History.—The victim of the accident, a healthy man of about 30 years of age, was seated in the forward part of the smoking car when the engine, mail car and baggage car left the track and ran down an embankment into a deep lake. The car in which the patient sat was also about half submerged. He, though shaken up, retained control of himself and made his way through the window and remembers swimming in the lake. An employé who stood on the bank states that he offered the swimmer the end of a stick in order to draw him to the shore; before this could be done, however, one of the tanks of acetylene gas, which had broken from its fastenings, was seen to have taken fire and floating on the surface of the water, was discharging a large jet of flame from an orifice with great force. The tank, floating past, threw the flame full in the face of the swimmer rendering him unconscious for one or two hours. On examination severe burns were noted on the hands and face, and in the cavity of the mouth and pharynx and on stripping the patient marked emphysema was seen extending on both sides from the lower jaw to the lower end of the sternum, being most marked about the neck and upper chest. There was marked dyspnea and some pain was complained of about the neck and pharynx and to some extent about the right clavicle.

For some days the patient seemed in serious condition but there was little if any rise of temperature. Some expectoration of a bloody nature was noted and at times small black masses were mixed with the blood. The emphysema had extended slightly over the abdomen but was not so marked above, leading to the inference that the pressure was only in process of equalizing and that the total quantity of air had not increased since the accident.

During the subsequent stay of the patient in the hospital careful examination failed to show any fracture of ribs or clavicle and the case made a slow recovery without new symptoms of importance. Up to the middle of October there persisted a slight amount of gas in the upper abdominal wall.

None of the commonly accepted theories of the etiology of emphysema explains this case. Possibly the sudden pressure in the mouth and pharynx caused a rupture into the subcutaneous tissues, allowing gas to escape into them.

Attractive Food for the Invalid.—The physician will find it worth his while not only to investigate the articles of food to be prescribed but to be sure that they are daintily and attractively presented. The order in which they are to be given should be arranged so that the appetite may not tire.—*Medical Times.*