Three months and a week after the accident, two and a half months after the gangrene was thought to have been past, the temperature rose to 102°, with headache; and a patch of the grey exudation again appeared. This was rubbed with silver nitrate, and he was better next day, but still had pain. The caustic was again applied four days later, and a third time after three more days. The dressings were then changed every other day, and he got up on the intervening days, and steadily recovered.

Four months after admission, the knee being ankylosed in the straight position, he was, for security in getting about, fitted with the shorter ("calliper") splint (as in Fig. 2), attached to a cloth boot, and kept on day and night. He was discharged on August 24th, 1890, but some three or four weeks later discarded the splint, as he found the stiff straight knee unyielding, and comfortably fit for use without it.

Remarks.—This man accosted the writer in the street on February 7th, 1910, nearly twenty years after the accident, in which interval nothing had been seen or heard of him. A few days later he was photographed (Fig. 1). He is a tax collector and has walked many miles a day for years, with very little halt in spite of his stiff knee, on which the scars of his injury and operations are manifest. This is the only case of hospital gangrene ever seen by the writer, whose previous notions were chiefly gained from Lister's account and treatment given in the *Lancet* of March 23rd, 1867, and pictorially from the chromolithographs in the Surgeon-General's report of the American War, which he had copied and enlarged many years ago, and has used ever since to illustrate his annual lectures.

Fig. 1.—Twenty years after injury.

II.—Compound Fracture of Femur: Recovery without Defect.

On November 4th, 1898, the writer was called by Dr. Alexander Fisher of Liverpool to the case of a youth, aged 16, who had met with compound fracture of the right thigh near the knee. In the course of his duty as apprentice engineer, while sitting on the slide-rest of a large machine lathe at a foundry, his limb was jammed between the tool and the work. There was a wound on the outer and another on the inner side, both leading to a jagged fracture of the bone.

The dressing and setting of the fracture were carried out on his mother's dining-table, which served afterwards as his bed during recovery. A large tea-tray was placed under the limb to catch the copious washings of the skin, while the wounds were protected and tied up with cyanide gauze. The surfaces were begrimed with dirt and machine oil. Warm carbolic lotion 1 in 40 was alone used for this purpose, vigorously rubbed in with added soap, after which the wounds were dressed with carbolized cyanide gauze, firmly bandaged on with the limb held at full length. A Thomas's knee splint, projecting some distance below the foot, was slipped on, and the limb kept in it at full length by tails of wide, strong bandage firmly stuck to the leg by plasters, doubled with the sticky sides out, fixed by rolls of bandage over all, and the loose tails tied to the lower end of the iron splint; counter pressure was provided by the padded ring at the upper end against the perineum.

Plenty of dressing was packed around the wounds and fractured region, covered with hollow splints of sheet iron surrounding the thigh, encircled by strips of bandage and tied firmly to the iron bars of the longer splint. Perfect stillness was attained from the first, and all along the patient could control his own attitudes on the improvised bed, and could very shortly sit up occasionally when he chose.

The dressings were changed on loosening one or two at a time the sheet-iron splints, of which that placed behind the limb reached a few inches beyond the knee, and was independently slung to the iron bars, keeping level the

fractured region, and seldom needing adjustment. No suppuration occurred in the wounds, which soon closed very kindly in their depths, and at the surface cleanly granulated.

The severe pinching of the injured part in the irresistible machinery, during the few seconds before stoppage by the turner, led to superficial necrosis of the skin in patches near the wound, on the outer side of the limb. This was at first dressed like all the rest with carbolized cyanide gauze; but, when these necrosed layers gave place to ulceration, the great tenderness was relieved by smearing boric acid ointment on the gauze, and avoiding the irritating carbolic lotion. A shortened "calliper" knee-splint (Fig. 2) attached below to a boot, with bandage round the knee (supported on a leather band pinned across) was now used, and worn night and day after six or seven weeks, by which time the bone was firmly united and the sores healed. This enabled him to be up and about the house, and by its full length took most of his weight off the limb, for fear of bending the unhardened united bone. In less than three months he was allowed to remove the splint at night, and to dispense with the bandage round the knee, thus permitting slight use of the thigh muscles and a trifling movement of the knee-joint.

Remarks.—The leather band, pinned behind as a support to the knee, is shown here pinned in front of the thigh, to be out of the way and permit a view of the inner scar during the photographic process. It will be noticed that the knee-joint is thickened, an almost necessary part of the injury, due to the violence that fractured the bone. The maintenance of the limb in the straight position, for the time required to secure due hardness of the bony union, is always followed by gradual return of the knee to suppleness and to the proper shape shown in the other limb. Any attempt to hurry this restoration of the knee, by forced movements, is apt to result on the contrary in fresh injury and swelling, with delay or even prevention of suppleness.

Fig. 2.—Three and a half months after injury.

VAGINAL HYSTERECTOMY FOR ENDOMETRITIS.

By F. P. STURM, CH.B.ABERD.,
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THE following case is recorded because an unusual, not to say heroic, method of treatment for a fairly common and very troublesome condition has resulted in a measure of success which is not often attained by the less drastic procedures usually carried out in cases of equal severity.

CASE.

Early in 1910 I was consulted by a married woman, 39 years of age, who had been a hard worker all her life, and was the mother of a large and healthy family. She complained of constant dragging pains in the groins and back, dysuria, menorrhagia, and a profuse semipurulent discharge which was occasionally offensive. For several years she had been practically a chronic invalid, and so profoundly was her general health undermined by the constant pain and discomfort that both she and her relatives were convinced of the presence of malignant disease. She said that she had undergone several operations, by which I understood her to mean that she had been curetted. Examination, in the course of which a very fetid pessary was removed, revealed a large "boggy" uterus, extremely painful upon pressure, freely movable in every direction, with the fundus well above the pelvic brim. The sound passed four inches. The cervix, which was the size of a Tangerine orange, was studded with innumerable small semitransparent nodules and was very friable to the touch. The nodules were soft, there was no ulceration, and the general appearance was not that of malignancy. Pressure upon the uterus caused quantities of mucus to pour through the cervical canal. The possibility of specific infection was excluded by repeated microscopic examinations for the gonococcus, which was never found.

The chronic course of the disease and the very gradual deterioration of health from the long-continued pain and discharge were also points which were against the probability of malignant disease. Upon the other hand, the uselessness of any mere scraping operation was so evident and the danger of ultimate malignant degeneration so real that I had no hesitation in suggesting hysterectomy. Dr. M. J. Halton was called in to consultation, and agreed that no curetting, however thoroughly carried out, could cure the condition as it existed. It is due to him that the patient and her relatives finally agreed to operation, which I performed a week subsequent to the consultation.

Operation.

The uterus was removed by the vaginal route. The cervical mucosa having been incised all round, a sound was passed into the bladder, which was then easily peeled off the anterior wall of the uterus and thrust upwards. The rectum was dissected from the vaginal wall, the peritoneum opened anteriorly and posteriorly, and each broad ligament clamped with a single 11-in. pressure forceps. A few snips with blunt-pointed scissors freed the uterus from all attachments and permitted its removal. There was no bleeding. Not a single ligature or suture was used. The vagina was lightly packed with iodoform gauze and the patient put back to bed. The clamps were removed under chloroform in forty-eight hours. The gauze packing was not replaced, a simple antiseptic pad upon the vulva being all that was considered necessary.

Result.

The temperature never rose above normal, and the discharge, which ceased entirely within ten days, was so scanty that the dressings were scarcely soiled after the first two days. During the forty-eight hours following operation—that is, before the clamps were removed—the catheter had to be passed several times. Within ten weeks of the operation the patient was serving customers in her shop.

I saw this patient again only a few days ago—that is, about ten months after the operation. She told me that she was enjoying perfect health for the first time during many years. She is able to perform all the onerous household duties which fall to the lot of women of her class, even including the weekly washing. It may be claimed that she is cured therefore in the fullest sense of the term.

Though I have been unable to find in the literature at my disposal that hysterectomy has been advocated as a routine treatment for chronic corporeal endometritis, this case has convinced me that it is a justifiable treatment under certain circumstances. Every practitioner knows how hopeless is the condition of many of these women. The minor procedure of curetting, while it may relieve some cases in which the disease is not of long standing and the tissues are still comparatively healthy, is at best but a palliative measure, more likely to determine the onset of malignant degeneration than to eradicate precancerous conditions. There seems to be no reason why any woman, within sight of the menopause, who is suffering from such a distressing complaint, should retain an organ which is not only useless but is even a constant menace to her health and existence, especially when that organ has already satisfactorily performed all the functions for which it was created. Vaginal hysterectomy by the double clamp method is so safe, so simple, and can be so rapidly performed, that I see no reason why it should not be the operation of election in cases of chronic endometritis which have failed to respond to more conservative and less effectual procedures.

A CASE OF TRAUMATIC PNEUMOTHORAX AND PLEURAL EFFUSION SUCCESSFULLY TREATED BY RESECTION.

BY

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THE following case of traumatic injury to lung, followed by pneumothorax and then pleural effusion, which recovered after resection of rib and drainage, may be of sufficient interest to publish, as several authorities advise against drainage of the pleural cavity in effusion. Mr. Godlee, with Dr. Fowler, are emphatic on this point. They say, at page 596 of their book entitled *Diseases of the Chest*:

The surgeon is often asked to open these, especially if the fluid has become slightly turbid. My experience is that if this

be done the fatal conclusion is hastened. Such patients get along well with large accumulation of fluid in the chest, but when free opening is made they become short of breath, and as the discharge is copious for a long time, it is very likely that septic organisms will be allowed to enter. This is the beginning of the end.

Another interesting point is that while the remittent, and then intermittent, temperature, together with the general condition of the patient, strongly pointed to an empyema, a bacteriological investigation of the fluid showed it to be sterile.

History of the Injury.

On January 26th, 1909, G. B., aged 17, a farm labourer, left his horse and cart at the door of a shop. A passing lorry caused the horse to bolt. He immediately gave chase, and managed to gain a hold on the back part of the right shaft. After running like this for about a hundred yards, and finding he could no longer keep pace with the galloping horse, he threw himself sideways from the cart, but was caught by the wheel, and the cart, containing a load of five hundredweight, passed over his left leg about 3 inches above the ankle.

State on Examination.

I found the patient lying on the ground suffering from a compound fracture of the left leg, and complaining of great pain in the region of the right scapula. After seeing to his injuries he was placed on a stretcher and conveyed by train to Fleetwood Cottage Hospital. The leg was placed in splints and gave no further trouble. On the right side of the chest ill-defined crepitus could be elicited in the region of the scapula, but it was difficult to say whether it was due to injury of the scapula or to the ribs beneath it.

Progress.

In the course of a few days the patient's breathing became embarrassed, the right side of the chest was distended, the heart pushed over to the opposite side, the percussion note tympanitic, and all the signs of pneumothorax were present.

The temperature was 99° F. on admission, but rose steadily to 102° at the end of eight days, there being a morning remission to 100°. This remittent temperature lasted for two weeks, when the patient became suddenly very ill, and the temperature rose abruptly to 104° for twenty-four hours. A sudden drop to 99° was charted next morning, and for the next four and a half weeks the temperature was intermittent, averaging 98° in the morning and 100° or 101° in the evening.

Aspiration.—With the rise in temperature the signs of pneumothorax were replaced by dullness, etc. The question now arose as to whether the condition was pneumonia, traumatic pneumonia, or pleural effusion. As slight improvement followed, it was decided to watch the case and see if the condition would clear up. The improvement was not maintained, and on March 22nd I aspirated and withdrew nearly four pints of viscid brown fluid so thick that it flowed but slowly through the cannula. Improvement at once took place; the temperature fell to normal and remained there, and the general condition became more satisfactory.

Second Aspiration.—He left hospital on April 21st, 1909, but three days later became very ill; he felt too weak to stand, had rigors and dyspnoea, and on the following day was readmitted to hospital. The right side of the chest then gave the same physical signs as were present before aspiration. Aspiration was again performed, and about two pints of fluid similar to that removed on the previous occasion were withdrawn.

Resection.—Two days later, Dr. McKinnon of Fleetwood giving the anaesthetic, I resected a portion of rib in the posterior axillary line on a level with the nipple and drained the pleural cavity.

RESULT.

The sinus closed in about three weeks, and the patient has remained quite well since.

Some of the fluid was sent to Professor Delépine at Manchester for bacteriological examination. No organisms were found in cover-glass preparations, and no growth was obtained on inoculating tubes of various culture media.

At the present time—January, 1911—the patient remains in good health, and is able to follow his employment. The right side of the chest shows flattening, with droop of the shoulder and prominence of the scapula. The chest expands fairly well on inspiration, although the breath sounds are weak on the right side. Measurement shows the circumference of the right side of the chest to be 1½ in. less than that of the left side taken on level of nipple.

THE report submitted at the thirty-seventh annual meeting of the Central London Throat and Ear Hospital on May 9th showed that during the year 723 patients and 11,404 new out-patients had received treatment. Of the former, 58 per cent., and of the latter 37 per cent., were sent to the hospital by medical men. This fact, it was pointed out, not only indicated the esteem in which the institution was held, but disarmed any criticism as to abuse of its wards and out-patient department.