Fracture of the Sternum. By Dr. W. v. Brunn (Zentralbl. f. Chirurgie, 26th April, 1913).—On account of the rarity of fracture of the sternum, especially by indirect violence, the author thinks that the publication of three very similar cases occurring in his own practice is fully warranted.

The fractures were all due to similar causes, viz., the falling of a heavy weight on the back of the neck. In all three the fracture took place at the junction of manubrium and body of sternum, yet each was of a different type.

In the first case, that of a man of 49 years on whose neck a bale weighing more than one cwt. fell, the fracture was transverse, and even now a ridge can be felt. This patient also had several ribs broken. He resumed work after thirty days.

In the second case the manubrium was displaced and slipped in front of the body. There is still a step-like projection felt. The accident was somewhat similar to the above, but the author draws special attention to the fact that the sternum was the only part of the body injured.

The third was that of an ill-nourished woman, of 45 years, who was struck on the nape of the neck by a weight of 80 lbs. Here the body of the sternum was displaced in front of the manubrium, and the projection is still easily made out. This patient sustained, in addition, a fracture of the malleolus of the right fibula. —CHARLES BENNETT.

Surgery of Prostatic Atrophy. By Dr. H. L. Posner (Zeit. f. Urologie, Band VII, H. 4, 1913).—The author has, on several occasions, been called upon to deal with two apparently opposite morbid conditions of the prostate, namely, hypertrophy and atrophy, presenting very similar appearances.

In well-marked cases the decision often hangs entirely upon local conditions, and after operating for hypertrophy and finding atrophy, one may be put to it to justify the diagnosis.

According to anatomical statistics, the atrophic condition is no rare one, yet only occasionally does the suffering caused by it bring the patient to the physician, and still more seldom to the surgeon.

The complaint, when made, is referred to some abnormality of the bladder function, and so opens up a complicated process of differential diagnosis. The diagnosis once made, one commonly is content with conservative therapeutic measures, though Barth claims to have cured patients by prostatectomy, and has pointed out that this method is most applicable to the atrophy resulting from chronic inflammation or from senility.

The author appendix reports of four operated cases, of which these are two:—

1. Man, aged 51 years, had gonorrhoea twenty-five years before. For five
years before coming to hospital there was smarting in the urethra, and increasing difficulty of micturition. Finally, the urine passed in drops, with great pain, but retention was never complete. Examination revealed a small, tender prostate and atonic bladder.

Wilm's perineal operation was performed, and the gland, not permitting of easy resection, was removed piecemeal. The bladder was opened and drained. Microscopically the prostate showed inflammatory infiltration round scanty gland-tissue. By the thirtieth day the patient could retain urine for several hours with comfort, and was dismissed.

2. Patient, aged 61 years, with no other illness in his history, had for several years increasing difficulty in micturition, culminating in complete retention, necessitating the catheter on the four days preceding his admission to hospital. Examination did not suggest abnormality in the size of the prostate. Perineal prostatectomy was performed, the gland being somewhat easily shelled from a dense capsule. Patient left on the twenty-sixth day, able to retain urine for several hours comfortably.—Charles Bennett.

The Implantation of Silk in Poliomyelitis Paralysis (American Journal of Orthopedic Surgery, May, 1913.)—B. Bartow and W. W. Plummer present a second paper on the implantation of silk into the articular ends of bones where the joint has been rendered useless by paralysis.

The idea is advanced that a limiting and reinforcing effect follows in the joint from inflammation due to trauma of operation and the presence of a foreign substance. The silk strands become practically converted by organisation into living tissues.

The authors have employed the procedure in fifty joints, and have made the following observations:—

In no case has infection followed implantation, and the silk has never shown any tendency to cut its way out. It is better to use thin silk, doubled or quadrupled, than a single heavy strand. Twenty to twenty-four weeks should elapse before unprotected use of the joint is permitted. The valgus type of foot deviation relapsed more often than others because of its frequent association with knock-knee.

When dealing with the foot it is necessary to remove fascial contraction and all resistance preventing the over-correction of the deformity before introducing silk.

The operation for the knee-joint is as follows:—A small incision, \( \frac{1}{2} \) to \( \frac{3}{4} \) inch long, is made over each condyle in line with the lateral border of the patella. The drill is pushed through the condyle, the joint, and the head of the tibia, to emerge near the side of the insertion of the patellar tendon. A puncture through the skin over the point of the drill allows it to protrude. Both ends of a piece of aluminium bronze wire are threaded into the eye of the drill. The silk is then dropped double into the loop of the wire and pulled through the bones as the drill is withdrawn. The same is done on the opposite side of the knee. The drill is again inserted in the incision and tunnelled through the soft tissues in the same line, close to the bones, to the point where it emerged from the tibia, the bones not being penetrated, and the other end of the silk is pulled through the soft parts over the bones. The ends are tied with the leg in full extension. The incisions are stitched and dressed, and the limb is put up in plaster.

Special drills are used for these operations. For the ankle the procedure is essentially the same as for the knee.

In the deltoid and arm type of paralysis the humerus is slung on the acromion by two parallel silks passing through the acromion and the head of the humerus.

Photographs of eight treated cases are shown, suggesting excellent results. Nathaniel Allison treats of results obtained by implantation of silk tendons.

He is of opinion that arthrodesis should not be done in patients under twenty years of age, and that, especially in the foot, excellent results follow
fixation with artificial ligaments and tendon transference. The use of silk strands implanted in the tissues about the unstable joint to check excess of movement may now be said to be the operation of choice.

The fate of the silk is interesting. The tissues, instead of attempting to rid themselves of it, use it as a trellis upon which to build fibrous bands.

Typical operative procedure for the foot is described by the author:—He introduces the silk in a continuous cord, drills the tarsus and passes the silk through a hole of small calibre in the bones from tendon insertion to tendon insertion across the foot, then passes the silk up the tendon sheath to a point of exit high on the anterior surface of the tibia, here tying the ends, after suture to the periosteum. In the os calcis two small holes are drilled from the plantar surface of the bone to either side of the insertion of the tendo-Achillis, the silk is then passed upward on both sides of the tendon, and the loop at the heel is brought taut, when the silk is sutured to the tibial periosteum. The passing of these silk strands up the tendon sheaths is accomplished by a long flexible probe, which has an eyelet at its end.

—CHARLES BENNETT.

Subcutaneous Bruising of the Pancreas. By Dr. Hagedorn (Zentralbl. f. Chirurgie., 25th January, 1913).—In the summer of 1912 the author had the opportunity of treating, almost at the same time, two cases of subcutaneous bruising of the pancreas.

The first was that of a young man who, three days before admission, had been run over by a cart, one wheel passing over his abdomen. After admission he vomited large quantities of blackish material. There was bruising of the abdominal wall, and the abdomen was tense, distended, and tender all over. The pulse was rapid but the temperature normal. Neither albumen nor sugar was found in the urine. Relief of all the symptoms was afforded by gastric lavage and the improvement was maintained for five days. At the end of this period, however, there was a return to the original condition, and once more washing out of the stomach was successful. After this period of well-being the patient became so ill that laparotomy was performed on the fourteenth day. When the abdomen was opened there was found to be a considerable quantity of blood-stained fluid in the cavity, but no agglutination of peritoneum was seen. The omentum and mesentery were studded with small particles of necrosed fat. On the pancreas being exposed through the mesocolon, two loops of bowel were found to be slightly glued together, but the eye detected nothing abnormal about the pancreas itself. The fluid was mopped out and drainage instituted.

During convalescence the left parotid was incised to liberate pus, and the patient also suffered from acute diarrhoea; nevertheless, he was dismissed cured at the end of eight weeks.

The second case was that of a seven-year old boy whose chest had been injured by a cartwheel. On admission to hospital a few hours after the accident the patient appeared to be desperately ill. Vomiting was severe and the abdomen was distended, with general tenderness. The pulse was rapid but temperature normal. Next morning collapse set in and the abdomen was opened. Blood-stained fluid was present in the cavity, but the peritoneum was smooth. Fat necrosis was obvious in the omentum and the mesentery. The pancreas itself appeared normal. The fluid was removed and the abdomen completely closed. Patient was dismissed well on the sixteenth day.

In his discussion the author draws special attention to the presence of fat necrosis in both the cases, and he points out that, if we are to judge from the reports of cases of injury to the pancreas, so many of which are now appearing, this condition is quite often absent.—CHARLES BENNETT.