

tion of some extent of the periosteum and subsequent danger of necrosis. Both these influences will act against the union of the fragments. The formation of large splinters may cause difficulties in union of fragments. The severer forms of inflammation of the periosteum, bone and medulla are more frequently found in these fractures than in fractures of the ordinary varieties. Moreover, fat emboli, tetanus, septicæmia, delirium and fatal issue are more common in spiral complicated fractures. The recovery in these fractures is of much longer duration. The diagnosis is not difficult in those cases where an external wound exists. In subcutaneous spiral fractures palpation is a means of diagnosis. Excessive mobility of fragments shortening, protrusion of the broken fragments and the history are points of diagnosis. Absence of direct violence and the presence of pain on manipulating fragments at a distance are of importance. The prognosis is graver than in longitudinal and transverse fractures. The author concludes that modern antisepsis will allow our treatment of these fractures to be more conservative than formerly. In spiral fractures bone suture and extension may be found useful adjuncts in treatment.—*Zeitsch. f. Chir.*, bd. 28, heft. 2.

HENRY KOPLIK (New York).

II. Case of Dislocation of Seven Vertebrae en masse. By Dr. K. SCHULZ (Margelan, Russian Asia).—A gunner was knocked down by frightened horses drawing a 70 *puds* (about 2,520 pounds) piece, the two right wheels of the carriage swiftly passing across his loins, while a left wheel slightly touched his left leg. When brought to a lazaretto shortly afterward, he was very pale and complained of severe lumbar pain and inability to move his lower limbs. The patient having been placed on his abdomen, an enormous fluctuating (bloody) tumor was found occupying the spine from the 9th dorsal vertebra down to the sacrum, the skin over it being intact. On examination with a finger, the last three dorsal and the first four lumbar vertebrae proved to be dislocated forward as a whole, the apex of the 10th dorsal spinous processes being felt at the level of the base of the 9th one. The ribs were intact, but the 9th ones formed each an abnormally

strong curvature. There was no crepitation. Sensibility and motion were totally absent on both sides up to the upper limit of the dislocation. The bladder was paralyzed, catheterization removing bloody urine. On the third day Dr. Schulz decided to make an attempt at reducing the formidable luxation. No chloroform was administered, the patient lying as always on his abdomen. Having ordered four assistants to steady the man's shoulders and thighs, the author, standing astride over the patient, placed his palms on the abdomen and commenced to produce a firm and steady pressure on the abdominal wall. In a few moments he distinctly felt, under his hands, "some crackling and then a vague knocking sound which did not resemble at all the sound usually heard on reductions of bones of extremities." At the same time he noticed that the anterior (abdominal) prominent vertebral mass gradually yielded to his pressure, while the posterior (lumbar) depression disappeared. A closer examination showed that all the spinous processes but one fully regained their normal size, only the 4th lumbar vertebra remaining somewhat depressed, though but very slightly, compared with the former state of things. To keep the reduced mass *in situ*, the man was left on his abdomen with a hard cushion below, placed opposite the parts. There was but little pain during the manipulation; generally, the man bore them well, except a subsequent slight faintness. On the next day he first complained of pain about his (slightly crushed) left leg, while there appeared some mobility in his right lower limb. On the second day after the reduction, sensibility, micturition and (after a sitting of abdominal massage) defecation became normal. Under the influence of spinal massage, a steady improvement followed. On the forty-second day after the accident he was able to get up and take a couple of short steps. On re-examination six months later, there was found nothing abnormal about his spine beyond a swelling (blood-cyst) of the size of a hand's palm, at the level of the 4th lumbar vertebra. The lumbar flexion, however, was markedly limited, the extension *nil*. All other movements were free, though rather cautious, his carriage being upright. The patient complained only of his being unable to sleep on the back, and of his being easily tired, the fatigue giving rise to lumbar pains

The man was discharged from military service as an "unfit." Nevertheless, Dr Schulz is satisfied with the results of the reduction, since without the latter the patient would either die or, at all events, remain helpless.

VALERIUS IDELSON (Berne).

III. Temporary Osteoplastic Resection from the Pre-pelvic Wall for Extra-Peritoneal Exposure of the Bladder and the Neighboring Structures. By DR. P. NIEHAUS (Bern.) The author describes a procedure for more readily and certainly gaining access to the bladder, its interior and especially neck, and adjacent parts (cf. Also Langenbuch's *sectio alta subpubica*, ANNALS OF SURGERY, July, 1888.) An incentive was found in the ready healing of fractures of the pelvic arch, etc.

Vertical incision from above the bladder in the linea alba, around the root of the penis, than along the cruro-perineal fold to the upper third or middle of the ascending ramus of ischium. Here in the inferior angle of the wound the periosteum of the ramus is cut vertically and carefully pushed back. Division of bone by chisel. Small incision on horizontal pubic ramus close to inner border of crural vein, section of pectineus muscle and periosteum of pre-superior surface of the bone, careful lifting of the periosteum and division of bone with chisel. Then divisions of symphysis with knife or chisel and separation of inner soft parts to the lower resection-point. With two fingers behind the respective portion of selected pelvis draw this down and out putting the urogenital diaphragm on the stretch so that it can readily be freed without injury to vessels or nerves (vena dorsalis penis, and branches of common pudic artery, vein and nerves.) The corp. cavern. with the musc. ischio-cavernosus divided close to the bone. If the vertical incision does not afford sufficient room a lateral one may be added parallel to and just above Pourpart's ligament. In the female the round ligament is simply severed. In the male the spermatic cord has to be avoided. The testicle is drawn out of the scrotum carefully and laid to the side, to be brought back into place after the operation.