

ble for comfort. Any interference with this position, whether by relaxation of the muscles during sleep or by forcible flexion or extension, makes the patient cry out with pain. The sudden starts that are so often seen in this disease are the result of involuntary contraction of the muscles as pain summons them at once to their duty. A good example of this involuntary muscular tension, and one of great diagnostic value, is seen in hip-joint disease.

Now that the muscles are perfectly relaxed by the anæsthetic, I can move the joint freely, but not without distinct grating of the opposing surfaces.

What shall we do for him? We must put the joint at perfect rest, and must remove all undue pressure upon the articulation. How shall we do this? First we place the foot at a right angle with the leg, and then apply a nicely-fitting flannel roller bandage as far as the knee. Having thus protected the skin, we apply a plaster-of-Paris bandage until the foot is firmly encased from the toes almost to the knee. The sound foot will be supplied with a high-soled shoe, and when the plaster is hard we will allow the patient to go about on crutches; were he younger he would have to remain in bed and from time to time be carried about in the open air. As the swelling recedes it will be necessary to renew the splint or to pad and re-apply the old one, in order that the joint may be preserved immobile.

When abscesses complicate the case, you may cut openings in the splint through which the discharges may escape and through which the proper dressings may be applied. This dressing must be persisted in for several months, and great caution will be required in resuming the use of the limb.

Kneading and rubbing the muscles, the cold or warm douche, and gentle and cautious passive motion must be instituted at the proper time.

Constitutional treatment must not be neglected. In pale, delicate subjects give iron, changing its form from time to time. Cod-liver oil in small doses, and, when the appetite flags, quinine or tincture of cinchona, will be found valuable. Milk and eggs, animal broths and meats, should be freely given, and wine or some preparation of malt may be allowed. Such a treatment, conjoined with fresh air and sunshine, will doubtless in this case be rewarded by success.

When, however, an ankle-joint becomes disorganized by suppuration and caries, do not defer an operation too long. When the disease has progressed from the joint to the tarsus, you may be mortified to find that amputation is demanded, where, a few weeks before, an excision of the joint might have sufficed.

#### HYDRORACHIS.

This infant, three weeks old, has a swelling in

the posterior portion of the lumbar spine, which was there at birth. It is due to a deficiency in the posterior arches of the spinal column, permitting a protrusion of the membranes of the cord and spinal fluid. This condition is sometimes called *spina bifida*, but, as this term relates only to the deficiency of the arch, I prefer to use the other name.

The skin covering this tumor is reddened, attenuated, and fluctuation is readily obtained. Whenever the child cries the tension is slightly increased. Closely attached to the sac of the tumor is the spinal cord; the fluid has pushed it back. The fluid is cerebro-spinal or sub-arachnoid.

As a rule, these cases are not capable of being treated by any surgical measure. Occasionally we find the enlargement pedunculated, owing to the small size of the aperture through which the tumor emerged. Sometimes, also, the skin is of the natural color. These conditions constitute the most favorable cases for treatment.

When, however, the fluid presses the cord or its nerves, paralysis of the bladder, rectum, or lower extremities, or even convulsions, may be produced.

In favorable cases the arches may close spontaneously and a cure follow. Such a result occurred in a child that was under our observation in this clinic for a period of two years. The tumor diminished gradually and its neck contracted until it was reduced to the size of a small probe; nothing was left but a little mass of what appeared to be the redundant integument of an extinct sac. The mother was anxious for its removal, and, as the boy had grown strong and the case seemed to have been perfectly well for over a year, I consented to clip off this thread-like pedicle. Not long after this a serous fluid began to dribble from a hair-like opening. However, by passing a pin through its sides and by bringing the parts together with a figure-of-eight suture, the opening was successfully closed, and the child made a permanent recovery.

So long as the natural process of pedunculation is progressing, it is best to keep a close watch, but to abstain from any operative interference. It is only when the tumor enlarges and threatening symptoms arise that you are to resort to any operation.

One method of procedure is to apply to the pedicle an elastic cord so as to favor the isolation of the sac. Another plan is to use injections for its obliteration, just as we do in cases of hydrocele. For this purpose we have used successfully, in the case of another child, a solution consisting of fifteen grains of iodide of potassium and one grain of iodine to the ounce of distilled water.

Injections should, in my opinion, be confined to cases where pedunculation exists. In their employment the neck of the sac should be compressed, to prevent the iodine from entering the spinal canal. A delicate trocar is then introduced