the abdomen to below the left trochanter major, then round the thigh and across the perineum to the right groin and right anterior superior iliac spine, where it was pinned to the beginning of the bandage. Then it was wound round the back, above the iliac crests, to keep it from slipping down. I then brought it down over the hernia, on the left side, across the perineum, and round the right thigh, over the front of the abdomen to above the left iliac crest, and round the back to the right anterior superior iliac spine, where the bandage began. I then went on as before, following the same course, but making the bandage above slightly overlap the one below, until I got all the pubic region covered, except a small space in the middle line for the penis. This opening, which always weakens the pressure, must not be too large, otherwise the hernia will tend to escape through it. I consider that it was the altering of the method of putting on the bandage, that had such a wonderful effect in this case. This bandage had only been once on when the hernia disappeared.

Another point is, that enough wadding must be used, in order that, when the bandage is on, it may not pain the patient, and in order that the pressure may be equal all round the hernia. It is not necessary to put the bandage on very tightly, as it gradually becomes tighter the longer it is kept on. The different layers of bandage must be pinned to each other, to prevent them from slipping out of their place.

CASE OF CERVICAL SPINA BIFIDA, SUCCESSFULLY TREATED BY INJECTION.

By JOHN WARD COUSINS, M.D.Lond., F.R.C.S.,

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A MALE infant, ten weeks old, labouring under spina bifida, came under my care in January, 1886. The tumour was circular in outline, about half the size of a small orange. It occupied the middle cervical region, and was invested with healthy skin, except over a limited area at the summit, from which part a transparent process of the membranous sac protruded. The margin of the skin around this process was well defined. The tumour was tense, and the base broad and fixed. Immediately below it, there was a central depression, marking a considerable deficiency in the neural arches. When the infant cried, a free expiratory impulse occurred in the sac, synchronous with the impulse at the fontanelle. In the prone position, the tension of the tumour subsided; and, on pressure, the membranous protrusion became quite flaccid.

The treatment consisted in injecting, near the base of the tumour, half a drachm of Dr. Morton's iodo-glycerine solution. For some days after the operation, the infant manifested much fretfulness, and some irregular twitching of the limbs occasionally occurred. The slightest movement of the head appeared to cause considerable distress, and the whole tumour looked swollen and congested. This inflammatory stage was soon followed, however, by a brownish discoloration of the skin, and a gradual shrinking of the sac. At the end of six weeks the tumour was shrivelled to the size of a small marble. The remnant of the subcutaneous portion is now firm and immovable, and the membranous process is a mere nodule, covered with a thickened cuticle of the same colour as the surrounding skin.

REMARKS.—The case is recorded simply as another example of the value of the treatment by injection. The intrinsic character of the tumour is, of course, a matter of uncertainty. It may have consisted only in a protrusion of the spinal membranes, or it may have been a protrusion of the membranes, together with the spinal cord and its nerves. It is impossible, in the living subject, to ascertain the exact relation between the sac of a spina bifida and the important nervous structures with which it is connected. As a general rule, however, the size and position of the tumour yield very little information on this important question. Some evidence respecting the contents of the sac can be obtained by a careful examination of the surface of the protrusion. A median longitudinal furrow, or a depression near the summit, is a strong indication of an intimate association with the spinal cord. In this case, there were no furrows or depressions on the surface; still, the general characters of the tumour certainly pointed to the conclusion that the nervous structures were involved in the sac. The sessile base, the free communication between the sac and the spinal canal, and the size of the cleft, which extended to the bodies of several vertebrae, are indications that the tumour was really a meningo-myelocele. The absence of any depression on the surface renders it probable that the cord and the nerve-roots were not extensively incorporated with the structure of the tumour, and that they did not extend into its posterior wall. They may have been only con-

nected with the mouth of the sac; and, in this position, a considerable portion of the sac and its fluid contents must have been situated above them.

The infant was well nourished, and otherwise healthy. In every case of spina bifida, the constitutional condition demands as much consideration as the extent of the malformation; for, in estimating the probable result of surgical interference, a favourable state of the system, marked by the absence of other disorders and deficiencies, really appears to be of more practical importance than the external characters and the position of the protrusion.

CASE OF EXTENSIVE FRACTURE OF SKULL: TREPHINING: RECOVERY.

By T. LAW WEBB, M.R.C.S., L.R.C.P.Lond.

ON May 9th, 1885, E. J., a boy, aged 10, fell from a tree, about twenty feet, into a ditch, striking his head against a stone. He lay undiscovered until the following day, at noon, exposed to rain and extreme cold for twenty hours. When found, he was unconscious, and half naked, having partially undressed himself.

May 10th. When I saw him, he was cold, but partially conscious, answering questions fairly correctly when aroused. There was great swelling and puffiness over the whole of the right side of the head. He kept continually saying, "Take that hat off," and tearing at something which he imagined to be on the injured spot. Temperature 96°, pulse 80, full. I ordered brandy and warm milk. He took liquids freely, and slept at intervals. 10 p.m. His body was warmer; other symptoms were much the same. A depressed fracture was felt at the anterior part of the right parietal region. The pupils were equal, and contractile; speech was slow and thick; he vomited twice.

May 11th, 8 A.M. He was much the same, but less easily roused; he was continually grinding his teeth; he was not so rational; the bowels acted freely; severe ecchymosis of the right eye appeared. 3 p.m. Pulse 85, temperature 97°. He was worse; could hardly swallow, fluids running out of the corners of his mouth. After a consultation, I determined to trephine.

On incision, the fracture could be traced from the anterior border of the parietal bone to the occiput. Its upper margin was depressed, especially in front, the spot selected for trephining. Blood was flowing rather freely from the fissure. It being found impossible to elevate the whole of the portion depressed, the edge of the upper piece, where most driven in, was cut away, and six small pieces of bone removed. Bleeding from inside the skull ceased, much clot having been removed from beneath the scalp; the wound was closed and dressed antiseptically. 6 p.m. Pulse 80, very weak; temperature 98°. There was rigidity of both arms. He was very drowsy; he had wetted the bed. 11 p.m. He had rallied. Pulse 85; temperature 98°. He moaned, and complained of pain in the head, but slept at intervals.

May 12th, 8 A.M. He was about the same. 10 p.m. Pulse 90; temperature 96°. He lay always on the left side.

May 13th, 8 A.M. There was more swelling of the face. He was more conscious, and in great pain. He continued to wet the bed. 3 p.m. Vision was entirely lost. 11 p.m. He was sleeping a good deal. Pulse 88; temperature 99.5°.

May 14th, 8 A.M. Pulse 90; temperature 99°. The swelling of the face was less. 10 p.m. He had less pain, but still said "he could not see." He could, however, perceive light. Pulse 100; temperature 99.5°.

May 15th. The wound was suppurating freely. Pulse 88; temperature 99°.

May 16th. Pulse 80; temperature 98°. He was more rational.

May 17th. His condition was the same. The edges of the wound were pale and sodden.

May 19th. He was very hungry, eating all day.

May 20th. His state was the same. Pulse 100; temperature 99°. His mind was clearer.

May 21st. He was not so well; was much quieter. He had headache. Pulse 120; temperature 102°.

May 22nd. He was better. The wound gaped, exposing bone. Pulse 86; temperature 98°.

May 24th. The left arm trembled and twitched. There was considerable loss of co-ordination in the entire limb.

May 26th. He was better in every way; and clear mentally.

May 30th. The trembling continued. He vomited twice.

After this date, all the symptoms steadily improved. Vision gradually became normal. The wound healed soundly, all weakness of the left arm disappeared, and the boy made a complete recovery.