DISTRIBUTION OF ANÆSTHESIA AFTER DIVISION OF THE MEDIAN NERVE.

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IN the April number of "BRAIN" for last year there is a paper by Dr. James Ross upon the distribution of anæsthesia in cases of disease of the branches and roots of the Brachial Plexus. The following case, at present under my care, supports several statements in that paper. Krause's account of the distribution of the digital branches of the nerves of the hands is fully confirmed, except that in my case there was complete anæsthesia of the dorsum of the ungual phalanx of the thumb.

The anæsthesia was complete for some time after the accident, and was far more extensive than in the cases observed by Létiévant.

The patient, a medical student, was reaching a bottle of soda-water out of its case, when the bottle burst in his hand, severely cutting his right wrist in front and in the middle line.

This occurred on the 25th of September last.

At the time of the accident he perceived, as it were, a great rush of blood into the hand, which felt as though it was being greatly distended, and became cold and numb.

During the dressing of the wound, and every time the pad was used to swab up the blood so as to look for a divided nerve or artery, the pain was most acute, which was probably due to the pad coming in contact with the divided nerve.

The nerve was not seen during the treatment of the wound. The hand was put in splints for three or four days; and on their removal he found that the muscles of the hand supplied by the median nerve were paralysed, and that there was total anæsthesia in the area of distribution of its sensory branches.

Three days after the accident there was total anæsthesia of the radial half of the palm and thenar eminence, the anæsthetic area being sharply defined and not gradually shading off; it extended in the palm to a line contiguous with the axis of the ring-finger.

There was also complete anæsthesia of the palmar surfaces of the thumb, index, middle and radial half of ring-finger.

On the dorsum of the hand there was total anæsthesia of the ungual phalanx of the thumb and of the second and third phalanges of the forefinger and middle finger, and of the radial halves of the same phalanges of the ring-finger.

A few days after the accident he began to feel sharp shooting-pains in the hand and fingers, which would come on suddenly and as suddenly disappear. These pains frequently prevented sleep, but after lasting for about a month they gradually ceased.

FIGS. 1 and 2.—THREE DAYS AFTER ACCIDENT.

The Shaded portion represents complete Anæsthesia.

When he attempted to move the fingers he was always troubled with a sharp pain of a tearing character, which would at times extend into the forearm; this was especially acute on moving the index-finger. This pain also gradually ceased.

Since the accident there has been a great diminution of temperature in the three and a half fingers, and during the cold weather, he had great difficulty in keeping them warm. After exercise he frequently noticed the little and half the ring-finger and the inner part of the hand to be covered with

perspiration, while the rest of the palmar surface of the hand was quite dry.

At the present time (February), nearly five months after the accident, there is a scar in front of the right wrist passing obliquely across the tendon of the flexor, carpi radialis and median nerve. The scar is very sensitive when touched. A small bulla, containing blood, is seen on the inner side of the terminal phalanx of the index-finger.

No changes in the nails are to be observed. He has re-

FIGS. 3 and 4.—FIVE MONTHS AFTER ACCIDENT.

The portion thickly Shaded represents the Anæsthesia; the thinly Shaded portion Hyperæsthesia.

covered power to a considerable extent, being able to write with the right hand; but the grasp is much weaker than on the left side.

There is wasting of the thenar eminence on the right side. The circumference of the base of the right thumb being five inches, that of the left, five and a half. The response of the muscles of the hand supplied by the median is much diminished to faradism. To galvanism the response is increased, the contractions being slow and prolonged, the anodic closure contraction predominating.

The distribution of the anæsthesia at the present time, nearly five months after the accident, is as follows. The area of the right palm previously anæsthetic is now everywhere hyperæsthetic, a slight touch causing pain, the pain radiating into the fingers.

The hyperæsthesia extends over the palmar surface of the first phalanx of the thumb and encroaches on the first phalanges of the forefinger, middle finger, and ring finger.

The skin of the rest of the phalanges are still anæsthetic on slight pressure, but hyperæsthetic on deep pressure, the pain radiating into the fingers.

On the dorsum of the hand the following changes have occurred :

The anæsthesia previously present on the dorsal aspect of the ungual phalanx of the thumb has disappeared. The only alteration in the other fingers is that the anæsthesia of the middle phalanges of the fore and middle fingers extends now only over the radial half of the phalanges, the ulnar half being normal.