CASE
OF
A WOUNDED NERVE OF THE THUMB,

FOLLOWED BY

**SEVERE SYMPTOMS, WHICH WERE RELIEVED BY
A DIVISION OF THE NERVE.**

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ON a former occasion, I had the honor of laying before this Society, the account of a case, where some severe nervous symptoms which arose from the prick of a thorn, on the point of the finger, were instantly and permanently relieved by amputation*. I have now to relate the history of a case in many respects similar, and as the operation which was performed in this instance, has not, as far as I know, been usually adopted, though frequently proposed, I hope the following statement will not be deemed uninteresting to the Society.

A young gentleman received a cut with a gun-flint obliquely across the radial side of the distal phalanx of the left thumb. The wound was about

* Vol. VIII.

two thirds of an inch in length, and so deep as to divide the digital artery. Though accompanied with an unusual degree of pain, it readily healed by adhesion, and being considered of little importance, no further notice was taken of it. The patient, however, returning to his usual habits, and living rather fully, in a few days the thumb became painful, and the uneasy feelings, accompanied by constitutional irritation, had greatly increased when I first saw him, which was on the tenth day after the accident. No change could then be perceived in the appearance of the thumb, and the cicatrix seemed perfectly natural, notwithstanding he complained of great pain not only in the wounded thumb, but also in the fore finger and radial side of the middle finger, which extended up the arm, and as far as the neck and side. The pain was constant, and when the wounded thumb was even slightly touched, it became excessively severe. The pulse was frequent and tense, the face flushed, and the tongue white and frothy. A very copious general bleeding gave almost immediate relief; the pain in the arm and back decreasing, and the thumb becoming less painful to the touch. For three successive days all the local symptoms recurred, but yielded each time to a repetition of the bleeding, along with copious purging, and a strict antiphlogistic regimen.

He afterwards continued to suffer, sometimes very severely, whilst at other times he was com-

paratively easy, and his pulse, though frequently agitated, never became full or hard, so as to point out the necessity of further depletion. The paroxysms of pain, were several times distinctly produced from mental excitement, and on some occasions were brought on by taking even a very small portion of animal food. Opiates gave little relief, and nothing seemed essentially useful, but strong purgatives, and living on the most simple liquid food.

In this manner did the symptoms go on for ten days; three weeks having now elapsed since the accident. By this time he was considerably reduced in flesh and strength, and the *primæ viæ*, whose functions had long been deranged, previous to the accident, were now difficult to regulate. The wounded thumb, which was at all times painful, and extremely tender to the slightest touch, was sometimes seized with paroxysms of agonizing pain, which was now no longer confined to those fingers supplied by the radial nerve, but extended over the whole hand, arm, neck, and even down the back.

In this alarming state, the trial of some further means of relief seemed imperative. The good effects of amputating the finger in the case formerly alluded to, might have led me to adopt a similar practice in this instance, had not the appearance of the wound, and the division of the digital artery, distinctly pointed out the particular nerve which had been injured, and from which injury there

could not be a doubt but all the severe symptoms had arisen. I therefore thought it advisable to make a complete division of the nerve above the injured part, and with the concurrence of Mr. Cline, the operation was immediately performed, by making a deep transverse incision close to the second point.

The operation was instantly followed by a complete abatement of all the symptoms; for the thumb which he could not allow to be touched a minute before, he could now roughly handle, and all pain left the other fingers and hand.

The symptoms, however, did not remain permanently subdued; for during several weeks after the operation, whenever he took food of difficult digestion, when purgatives did not readily operate, or when his mind was any how excited, the pain attacked his hand and arm, and sometimes to a very considerable degree. After that time his health became quite re-established, and twenty months have now elapsed since the operation, during which time he has been able to take the most violent exercise in shooting and hunting. The point of the thumb has always remained numb, though not painful to the touch; and what strongly points out the sympathy which sometimes an injured part long preserves with the digestive organs, is, that when from any cause, this gentleman's stomach is disordered, he feels a pain in the injured thumb.

OBSERVATIONS.

Other cases which illustrated the remarkable effects of injuries of nerves, also pointed out to me the good result which might reasonably be expected from an operation such as was had recourse to in the case now related; whilst every day's experience showed, with what safety even the larger nervous trunks might be cut through.

A child received a punctured wound on the forehead, with the point of a knife, which was followed by convulsive twitchings of the upper eye-lid; but all these symptoms ceased whenever Portal made the puncture into an incision. It has sometimes happened, that in the simple operation of phlebotomy, a twig of the muscular cutaneous nerve has been pricked, and followed by very painful symptoms, all which have immediately subsided whenever the puncture was extended into an incision. The same curious phenomena were exemplified in a young gentleman, who soon after having received a wound on the forehead, saw double, the eye of the injured side being turned outwards. In order to remove a portion of carious frontal bone, three months after this accident, I made an incision across the forehead, which necessarily divided the left frontal nerve; and on removing the bandages, it was found that the eye-ball had resumed its natural position, and single vision was restored.

The effect of ligatures on nerves, also pointed out those striking peculiarities in their function and structure, already illustrated in the difference of the symptoms produced, either from a complete, or from a partial division of a trunk. The epileptic fit has, in many instances, been warded off, by tying a ligature round the finger, when the aura commenced ; and there is a case well known to many in this metropolis, of a gentleman who bruised his thumb by a fall in hunting, and who was afterwards subject to severe nervous paroxysms that commenced in the thumb, and extended up the arm through the system, and which he could arrest by putting a ligature round the thumb, so that he was in the constant habit of carrying a tourniquet in his pocket, to apply whenever he knew of the approach of a fit.

All these facts, viewed collectively, show that the partial division of a nerve is often followed by the most serious mischief, whilst, that in order to subdue such symptoms, the complete division of the nerve above the injury may be adopted as a safe and effectual means of relief.

It ought also to be here observed, that cases do occur where it is not practicable to divide the injured nerve alone, and in such cases, when the wound is in an extremity, amputation of the whole member ought to be resorted to. Hence arose the necessity of removing the woman's finger, in the

case already alluded to, and hence also did Mr. Denmark judiciously have recourse to amputation of the arm, in the case of wounded radial nerve, recorded in Vol. IV. of the Transactions of this Society.

It ought further to be remarked, that the partial division of a nerve sometimes happens without being followed by any of the distressing symptoms which have been described ; and the injuries where this takes place are distinctly marked by a loss of power in those parts supplied by the fibrillæ which have been divided, and by a subsequent wasting of the soft parts. An artillery officer received a wound on the upper and posterior part of the thigh, in the site of the sciatic nerve. He has since completely lost the power of his foot and lower part of the leg, both of which have been gradually wasting away, whilst all the upper part of the limb is perfectly natural. A young man received an injury on the spine, after which both testicles wasted away. This wasting of the soft parts after a wound, may, perhaps, be considered as a pathognomonic symptom of a nerve having been injured.

A series of observations on the varied effects of injuries, and on the various combinations of symptoms in the diseases of nerves, as well as in their symptomatic affections, might not only lead to important practicable results, but would, I am per-

suaded, ultimately afford a more satisfactory explanation of the functions of this part of the animal structure, than has hitherto been accomplished by the most enlightened physiologists. For what those actions are on the sentient extremities of a nerve, which produce sensation, and how the same action passes along their course to the sensorium, are questions still involved in the greatest obscurity.