had been amputated, and in each instance the disease had recurred in the stump. The patient was admitted into the hospital under Mr. Heath, and both feet were eventually amputated. A microscopic examination of the nerves from both feet was made by Mr. Priestley (*Lancet*, 1883, vol. i, page 452), and in each instance he found well-marked evidence of sclerosis.

In this case, which has now been in progress for six years, and which is still under observation as an out-patient, there has never, from first to last, been any evidence of locomotor ataxy. The changes here found in the peripheral nerves resemble very closely those met with in a case recorded by Messrs. Savory and Butlin (*Medico-Chirurg. Trans.*, vol. lxii, Case v, page 378). Almost identical cases have also been described by other writers; so that it appears probable that perforating ulcer may, in some cases, be dependent simply on disease of the peripheral nerves, without any apparent implication of the nerve-centres. Of course, it is quite possible that, in cases of this kind, symptoms of central disease (*e.g.*, of locomotor ataxy) may eventually develop themselves; but, in Case iv, six years have now elapsed, and as yet no indications of the onset of that condition are present.

CASE OF SECONDARY SUTURE OF ULNAR NERVE SIX MONTHS AFTER ITS DIVISION.

By HERBERT W. PAGE, M.A.Cantab., F.R.C.S.Eng.,
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In a paper on "The Immediate Suture of Divided Nerves," published two years ago in this JOURNAL (vol. i, 1881, p. 717), I referred to cases of secondary nerve-suture which had recently been under my care. The following seems of sufficient interest to deserve a brief record.

J. H., aged 25, six months before admission to St. Mary's Hospital, received on the left wrist a severe wound from glass, which took a month to heal. From that time he had extreme pain in the cicatrix, his ring and little fingers became bent and useless, he was obliged to carry his arm in a sling, and his general health became seriously affected by the constant pain which extended both upwards and downwards from the site of the wound. Here, on admission, there was found a dense cicatrix an inch and a half long, running in a curved direction upwards and outwards on the anterior surface of the forearm from the styloid process of the ulna. It was excessively tender, and he dreaded the least touch. He had lost the power of extending the two last phalanges of the ring and little fingers, and to a less extent of the other fingers also, and the thenar and the hypothenar eminences, together with the interossei, were markedly wasted. Sensation was very defective, though not entirely absent, in the ring and little fingers, more especially on their palmar surfaces. The whole hand, indeed, was somewhat anæsthetic, and looked lifeless and withered from long disuse. It sweated constantly and profusely; the little finger was blue and slightly swollen, and the nail was much misshapen. Opposite the head of the fifth metacarpal bone was a dark purple patch of the size of a shilling, and just below the cicatrix the skin was distinctly hyperæsthetic.

The man was anxious to have something done for his relief, and accordingly, on April 4th, 1881, I cut down on the site of the ulnar nerve, and after much difficulty the separated ends were at length discovered. The upper end of the lower portion was completely hidden from view, being turned downwards and inwards, and ended in thick cicatricial tissue on the under surface of the tendon of the flexor carpi ulnaris. It was not enlarged, and a transverse section of it, when freed from the cicatrix, showed the appearances of healthy nerve. The lower end of the upper portion was swollen to about three times its natural size, and ended in a firm bulbous nodule, which also was bound in cicatricial tissue. From this it was dissected, and a third of an inch had to be removed before the section looked natural. It was necessary to dissect the upper part of the nerve free for a couple of inches, before the two ends could be brought into comfortable apposition. They were then joined by three fine catgut sutures passed through both sheath and nerve. The wound healed by first intention, thus fulfilling one requirement for the success of the operation. As early as the 13th, the man said his fingers "felt somehow different," and the anæsthesia when tested was certainly less marked. By the 28th, the sensation had decidedly improved, the cicatrix was free from pain, and he even had some returning power of extension of the last phalanges of the ring and little fingers.

He was discharged on April 29th, with instructions to use his hand as much as possible. He returned in a fortnight, having made but little progress; and it was, therefore, deemed advisable to place him under the care of Mr. de Watteville, who has kindly given the following record of his treatment.

"When he was first examined electrically, the phenomena of the complete reaction of degeneration in its advanced stage were present. At first galvanism only was used: the hand being placed in a basin containing hot water and one of the poles, and a flexible metal plate covered with wash-leather, and connected with the other pole, being fixed upon and above the seat of injury. The strength of the current was the maximum endurable; voltaic alternatives were made; and the application, lasting ten to fifteen minutes, repeated every day for the first few weeks. Later, faradisation of the muscles of the hand and ulnar nerve *above* the seat of lesion was used, conjointly or alternately with galvanism. The applications were reduced to two or three a week. After about a year of this treatment, the only muscle which was distinctly wasted was the abductor indicis. This muscle at first had almost entirely disappeared, so that the most powerful galvanic currents scarcely produced any visible fibrillary contractions. Having regained a fair use of the hand, the patient ceased to attend the hospital, but applied the faradic current himself every day for about six months, until the hand practically regained its normal appearance and functions."

When last seen, on February 23rd, 1883, the man stated that he had been at work as usual for several months, and that his hand was as useful as ever it was. There was then no sign of trophic disturbance; sensation was normal; there was no wasting; and his only complaint was of occasional pain in the cicatrix on change of weather, and inability to perfectly extend the last phalanx of the little finger.

Without making any further comment on the subject of nerve-suture, about which much has been written during the last few years, and with which I dealt at some length in my former paper, this case seems worthy of publication as an instance of complete recovery of nerve-function brought about by suture as late as six months after the division of the nerve, and also by the *steady and long-continued use of electricity* to restore the nutrition of the wasted muscles. Not a little, however, is the successful result in this case due to the patient himself, to his perseverance in using his hand after the operation, and his endurance of the pains of galvanism. In a case on which I operated about the same time, where there was an almost exactly similar wound, the same kind of trophic change, and a like incapacity, the patient, a nervous hysterical woman, gave no help whatever after the operation, and the result has in consequence been far from satisfactory. The nerve-ends had been pretty easily brought together, union of the wound had occurred without suppuration, and the trophic changes altogether disappeared; but the woman persisted in nursing her hand in a sling, and the needful application of electricity so distressed her, that she ceased attending the hospital, better in some respects than before the operation, but with a result very different from that of the man.

THE RISKS OF "MASSAGE."

By JULIUS ALTHAUS, M.D.,

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"MASSAGE," which has for a long time been the Cinderella of therapeutics, has recently seen a considerable change in its fortunes, and become as thoroughly fashionable as mesmerism and homœopathy have been at previous periods in the history of medicine. The "Weir-Mitchell treatment" more especially, which has been found very useful in some obstinate forms of hysteria, is now being indiscriminately applied to all sorts of cases of cerebral and spinal disease of which loss of power forms a conspicuous symptom; and it is therefore time that we should say, "Hands off!" lest a procedure which does good in a limited class of cases should suffer by the excessive praises of injudicious partisans, and eventually be thrown aside altogether.

Professor Busch of Berlin, who has written the most recent and sensible treatise on massage and gymnastics (in vol. ii, part 2, of von Ziemssen's *Handbuch der Allgemeinen Therapie*, Leipzig, 1882), recommends these proceedings chiefly for the treatment of deformities, and of muscular pain. Amongst nervous affections which have thus been treated, he mentions scriveners' palsy, stammering, some forms of hysteria, and muscular paralysis or paresis after poliomyelitis; without, however, saying much in favour of this treatment

In the latter conditions. It is well known that at various times epilepsy, idiocy, and some forms of insanity, have been treated by massage and gymnastics; but, fortunately, we now hear very little of such therapeutical aberrations.

It appears to me that diseases of the brain and spinal cord must, on account of the anatomical situation of these organs, be inaccessible to the influence of massage, which can only be applicable to more superficial parts of the body. Apart from this, however, it is important to consider that many of the most important diseases of these organs are of an inflammatory or irritant character, either primarily or secondarily; and this should make it self-evident that massage should not be used for their treatment, even if the suffering parts could be reached by it. I will here only allude to many forms of cerebral paralysis from hæmorrhage, embolism, and thrombosis, which are followed by sclerosing myelitis of the pyramidal strands; and most forms of primary lateral, posterior, or insular sclerosis of the spinal cord.

It is only charitable to assume that the advocates of massage, who recommend their favourite procedure in such and similar cases, are somewhat at sea with regard to the pathology and diagnosis of diseases of the nervous system.

That which may be good for developing and strengthening healthy muscles, or muscles which have been enfeebled by disuse or certain local morbid conditions, etc., is not for that reason suitable for the treatment of muscular paralysis owing to central disease. In most cases of lateral and insular sclerosis, which are, unfortunately, now much treated with massage and exercises, rest is indicated rather than active exertion; and overstraining of the enfeebled muscles acts prejudicially on the state of the nervous centres. I have recently seen quite a number of instances in which the central disease had been rendered palpably worse by procedures of this kind; and, in a case of cerebral paralysis which was some time ago under my care, the patient had, after four such sittings, been seized with collapse, which nearly carried him off.

CANNABIS INDICA.

By G. C. WALLICH, M.D., Surgeon-Major, Retired List.

THE following facts, though bearing but indirectly upon those special medical uses of Indian hemp to which attention has been drawn in recent issues of the BRITISH MEDICAL JOURNAL, may serve in some measure to explain the conflicting estimates that have been formed of the general value of the drug by different observers.

My knowledge of Indian hemp as a therapeutic agent dates from the year 1838, when its properties were communicated to me in Calcutta by my friend Dr. W. B. O'Shaughnessy; and, at his request, I made the sketch of the plant which is appended to his earliest memoir on the subject. During my subsequent service in India, I had many opportunities of testing the efficacy of Indian hemp in cases of cholera, tetanus, hydrophobia, and various minor disorders. But, though fully convinced of its value, like many other medical men, I soon became aware that the action of the drug was singularly uncertain, and that doses which in one locality produced a given effect, frequently failed to produce the same effect in another. Eventually it became manifest that this uncertain action was due to inherent differences in the composition of the resinous extract of the plant, incident on its being grown either in the plains or in the hill-districts of India. The drug had not, at this period, been supplied on indent to military hospitals at a distance from the Presidency; and those who wanted to employ it experimentally in their practice were, therefore, obliged to procure it for themselves from the native drug-dealers, either in the form of the crude dried plant or of the inspissated extract, which went by the native name of "churrus."

The fact which came to light was, that the therapeutic efficacy of the plant grown in the plains is very markedly inferior to that of the plant when produced in the hill-districts. I had no means at my command of ascertaining the particular conditions of soil, temperature, and mode of culture and preparation, upon which this superiority of the hill-plant is dependent; but it is now quite impossible to doubt that the conditions are of an analogous kind to those which, in a major degree, cause the same species of cannabis to produce a highly energetic medicinal ingredient in tropical and sub-tropical countries, whilst they exercise no such effect upon it when grown in our own temperate latitudes.

The fact of the superiority of the extract and mixture prepared from the hill-grown plant was, however, suggested to my mind by

what had been communicated to me in the years 1841 and 1842 by Dr. W. L. MacGregor, at Kurnal, a station then notorious for its extreme unhealthiness, and visited, at the period referred to, by consecutive outbreaks of cholera in its worst form, acute dysentery, and enteric fever.

Dr. MacGregor claimed to have successfully treated the two first-named of these formidable diseases by such enormous doses of "hill-opium" and croton-oil combined, that, had I not myself witnessed the results, I should have hesitated to vouch for their authenticity. Fortunately, those who would like to see a formal record of my friend's practice will find it in his work *On the Principal Diseases affecting European and Native Soldiers in the North-Western Provinces of India*, by Surgeon W. L. MacGregor, M.D., published in Calcutta in 1843. Meanwhile, it may interest the readers of the JOURNAL to learn that it was not unusual with him to give as much as "fifteen drops of croton-oil in the course of twenty minutes, or nineteen drachms of laudanum in the same number of successive hours, the doses of croton-oil being occasionally increased to twenty drops," without causing any untoward consequences whatever. Dr. MacGregor further states that "the smallest dose of opium given for sedative purposes in hypercatharsis, was from three to six grains; whilst in cholera it was given to a much greater extent."

On the merits or demerits of this practice I have no desire to express any opinion; but of this fact I still entertain a vivid recollection (and what I state can easily be confirmed by other medical officers who were stationed at Kurnal in the years named), that many cases *did unquestionably survive and recover*, if they did not actually owe their recovery to this supremely heroic treatment. Under any circumstances, it must, I think, tend to convince all who give the matter their serious thought, that there is even yet a good deal to be learned concerning the action of some of the most powerful known drugs upon the human organism, when it is already under the fierce spell of some form of blood-poisoning.

WOOLSORTERS' DISEASE.

By THOMAS WILMOT, L.R.C.P., M.R.C.S., Bradford.

THE following interesting case came under my observation. Wm. Hird, aged 41, a "carder," worked for eight weeks on night-turn, up to the 12th of May. He was a man of intemperate habits, but had always had very good health up to the time of the present illness. He was taken ill about mid-day on May 13th, but had no rigor or vomiting. I was called to see him about 4 A.M. on the 14th of May, and found him in the following condition.

He was lying on his right side, and breathing quickly, and complained of being very poorly and feeling a tightness across the chest; but he had no pain, and only a very slight cough; his ears, hands, and feet were bluish and cold, the skin was covered with a cold clammy perspiration; the temperature was subnormal in the axilla and rectum. The tongue was covered with a thick yellow fur, and he had a great thirst on him, was almost pulseless, and in a state of collapse, and was evidently in a dying condition. Physical examination revealed a few mucous râles over the chest, but no crepitation or dullness.

I came to the conclusion that the man was suffering from the form of blood-poisoning known as "woolsorters' disease." Dr. Bell saw the patient with me about 10.30 A.M. the same day, and agreed with me in my diagnosis. He was then rapidly sinking, and died an hour after our visit. Some blood was taken from the back of the hand, which did not flow at all freely; it was dark and stagnant. No bacilli were found in the blood taken before death. He lived about twenty-eight hours from the onset.

I made a *post mortem* examination fifty-four hours after death, in the presence of Dr. Bell. His body was fairly well nourished; there was a slight discoloration at the upper part of the thorax (but considering the heat at the time, the body was in a good state of preservation). There were no external marks or bruises. The brain was healthy. On removing the sternum, I found a gelatinous kind of substance in the anterior mediastinum, of a yellow colour. Clear fluid flowed freely from both pleural cavities; the right contained between three and four pints, the left two or three pints. The right lung was collapsed, and the left was very slightly congested. There were no signs of inflammation in either the lungs or the pleura. The pericardium was full of clear fluid. On opening the heart, the cavities were found quite empty, the valves were natural; there was a distinct staining in the left ventricle, which was continued into the aorta. The blood was dark, and very fluid. The trachea contained a little frothy mucus; there was no enlargement of the