

In the case of small effusions, and also in empyema in infants, we may use the hypodermic syringe alone, repeatedly removing small quantities of fluid.

In many other circumstances we may also employ this method. In the case of abscesses seated near the surface of the body, such as some hepatic abscesses, perityphilitic abscesses, and the like; and in a large number of swellings in limbs, &c., of doubtful nature, which come rather under the care of the surgeon, we may gain most valuable information. But this is not a fitting occasion for pointing out all the uses to which it may be applied.

Before summing up the points in favour of its use, let me say a word of the kind of instrument to be used, and the method of use. First of all, to fulfil all the conditions, it is essential that the needles should be fine, with a grooved and very sharp point, that they should be made of polished steel, and that they should be kept well tempered and scrupulously clean. The syringe should be rather large, made of glass, with metal fittings, and the piston always well soaked. The junction of the needle with the syringe must be thoroughly air-tight. It is essential that the operation of puncture should be as nearly as possible painless, that we may be able to tell the patient that it is less than a pin prick, and justify our statement. The needles should not be less than one and a quarter, nor as a rule more than one and three-quarter inches in length. The diameter should not, I think, exceed one millimetre. These details are not unimportant, for a very large number of common hypodermic syringes do not fulfil these indications, and I believe that they are essential if the pain is to be reduced to a minimum. Where it is desirable only to remove a moderate quantity of fluid, from one to one-and-a-half ounce (even a smaller quantity may sometimes be removed in empyema of infants with advantage), I employ a larger syringe, holding about an ounce, which is screwed on to the needle *in situ* after screwing off the small syringe.

As to the method of use, little need be said. The site of puncture having been determined upon, the ball of the left forefinger is firmly pressed into the intercostal space at the spot indicated, and the needle plunged boldly in close to the point of the nail. The pressure of the finger seems to deaden the sensibility of the skin, and the finger serves as a guide to prevent puncture of the rib. By way of preface to the patient, it is rarely necessary to say more than "Do you mind a prick?" and almost before the answer "Oh, no" is completed, the whole operation is over. Often I have been asked when I was going to begin, when I had already finished. The needle should be withdrawn rapidly, the finger being pressed against the skin close to it. Any long preface or display of instruments is to be avoided; for even a moment's apprehension may be prejudicial to a nervous patient; and the small size of the instrument is in this respect a great advantage.

I have no doubt that I shall be accused by some of a prolix narration of trivialities, or of magnifying the importance of indifferent details; whilst there will be some who consider other means of diagnosis always sufficient, and regard the routine exploration by the hypodermic syringe as a needless barbarity, to be employed only by those who belong to what a facetious friend of mine calls the "toasting-fork school."

To the first I must answer that nothing is unimportant of explanation which is frequently useful and often neglected or misunderstood. It has taken some years to convince me that so obvious and simple an aid to diagnosis needed any elucidation or enforcement; it is only because I find that it is in practice often ignored that I venture to urge its use, and to point out how it may best be applied.

But to those who object that it is needless or dangerous another answer must be given. There are some who rely upon external signs to the exclusion of other more exact methods, and who consider it a lowering of the standard of medical diagnosis to resort to such means as puncture. They prefer to rely exclusively upon the signs given by auscultation and percussion, and the position and shape of dulness, &c., as furnishing greater scope for the exercise of diagnostic acumen. On similar grounds many London physicians laughed at the stethoscope and auscultation when Laennec's methods were first used in England by Hope and others. I would be amongst the last to advocate the careless use of the hypodermic needle; in every case all other modes of physical examination ought to be first resorted to. But since diagnosis can be completed by the one, and only pushed to a certain degree by the other means, there can

be no reason why both should not be employed in doubtful cases.

The possible dangers I have never known to occur. The shortness and small size of the needle, and the small suction-force employed, are a guarantee against some of the evils which may arise from the longer needles and greater force of the aspirator. With ordinary cleanliness there is no possibility of giving rise to septic infection, nor can air enter the pleura, or suppuration be set up. I do not deny that puncture of the heart or of the intestines may be serious, and some would prefer not to puncture the peritoneum, though I have repeatedly done so without any ill effects, as have many others. But only by unjustifiable ignorance or carelessness could either heart or intestine be accidentally punctured. The latter may, as we know from treatment of intestinal obstruction, be sometimes punctured without harm, though not without risk, but with the heart there is always danger. But I do not think that any harm could result from the puncture of an aneurismal sac, or of an intercostal artery or vein, with so fine a needle as I have indicated.

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SOME PRACTICAL REMARKS ON THE USE OF MARTIN'S BANDAGE.

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WHEN Dr. Martin, some time ago, introduced to the notice of the medical profession his india-rubber bandage, and spoke so highly of its curative effects in certain forms of surgical disease, it was decided that the Metropolitan Free Hospital should obtain a supply for the use of the patients, and in suitable cases the satisfactory results obtained amply prove the accuracy of Dr. Martin's remarks in his valuable pamphlet. Amongst the cases treated by his bandage were chronic ulcers and varicose veins of the leg, acute and chronic synovitis of the knee-joint, and chronic bursitis of the elbow-joint, and to these cases I wish to draw attention. In the case of ulcers and varicose veins the bandage was applied in the morning before rising, and taken off at night when in bed. Generally when the bandage was taken off a number of ridges of various depth were seen in the skin, the result of the upper edge of each fold of the bandage pressing upon the leg more tightly than the lower edge, but this did not appear to cause any injury, and in no case did any abrasion or excoriation of the skin occur. In a few of the cases the toes and part of the foot below the bandage became slightly swollen, but the patients never complained of pain, and as a rule expressed themselves as feeling most comfortable.

The great utility of this treatment in ulcers of the leg may be shown by the fact that in the cases quoted below the patients were unable to leave their work to lie in bed for a couple of months, and had been attending hospital, one for a space of nine months, and another for five months, without deriving any considerable benefit, but from the time of application of Martin's bandage they improved, and were cured in five weeks time.

With regard to the varicose veins, hardly enough time has elapsed to allow me to judge of the efficacy of the treatment, but in one case, where the vein had nearly burst at the ankle, the bandage seemed, by the pressure exercised, to exert a beneficial influence; for the spot had healed in a week, leaving but little soreness, and the patient seemed to be doing well. It appears to have an advantage over the elastic stocking in those cases—viz., that it may be applied as tightly or as loosely as may be deemed requisite, and that it does not lose its elasticity.

In the case of acute synovitis of the knee-joint it exercised a wonderful influence in effecting a cure in nine days, and I have no doubt would have acted just as beneficially in the subacute case of the same disease had the patient been allowed to remain under treatment. In one case of chronic bursitis of the elbow-joint the bandage did not do any good, but this I apprehend was owing to the number of millet-seed bodies found in the tumour keeping up the irritation;

for although the bandage expelled the fluid for a time, it always returned. Ultimately an incision was made into the bursa, and the contents evacuated.

CASE 1. *Ulcer of Leg.*—Arthur R—, aged fifty-four, a labourer, attending hospital as extern patient, under the care of Mr. Walsham, has been suffering from two varicose ulcers of the leg for ten months, and has been under medical treatment for nine months without deriving any great benefit. Martin's bandage was applied on Dec. 2nd, 1878, and the patient desired to take it off at night when in bed, and then dress the sore with lead lotion, and to reapply it before rising next morning. He continued his ordinary occupation during the time he wore the bandage, and was discharged cured on Jan. 13th, 1879.

CASE 2. *Ulcer on the Leg.*—A. S—, aged forty-three, has been suffering from an indolent ulcer, circular, about three-quarters of an inch in diameter, and situated on the anterior aspect of the leg, for six months, and has been under treatment for four months without gaining any great benefit. Martin's bandage was applied on December 12th, 1878, and the same instructions given as in the preceding case. She improved considerably, and was discharged cured on Jan. 16th, 1879.

In all the cases of ulcer of the leg the bandage was applied directly on the sore, except when the patient complained of pain, which was very seldom, and then a piece of wet lint was applied between the ulcer and bandage.

CASE 3. *Acute Synovitis of Knee-joint.*—E. J—, aged eighteen, a healthy-looking young woman, a nursemaid, was admitted into hospital on Nov. 28th, 1878, under the care of Mr. Walsham, suffering from acute synovitis of the right knee-joint. It appeared from her history that, a week before, she suffered great pain in the joint, which afterwards became so intense that she could not stand, so she was obliged to come to hospital. When admitted her knee was red, swollen, hot and tense, tender to the touch, and, in fact, was in that condition that leeches, poultices, &c., were recommended to be used. However, desiring to give the bandage a fair trial, she was placed in bed and the limb was carefully bandaged to about half way up the thigh, and, strange to say, the pressure on the knee did not cause any acute suffering. She complained of the leg being rather painful during the night, but notwithstanding she slept fairly. On taking off the bandage next morning the redness had to a great extent disappeared, the heat was less, and the knee, which measured the night before fourteen and a half inches in circumference, the normal size being twelve inches, had now diminished to thirteen inches, showing a decrease of one inch and a half in sixteen hours. Bandage was reapplied every morning, and properly adjusted at night to prevent slipping. The size of the knee steadily decreased until Dec. 5th, 1878, when it measured the same as its fellow on the opposite side, and the patient was discharged cured on Dec. 7th, 1878. About a month afterwards she came to hospital suffering from slight ailment, but the synovitis has never returned, and she has perfect use of her leg.

CASE 4. *Subacute Synovitis of the Knee-joint.*—Alfred H—, aged five years, an unhealthy, strumous-looking boy, was admitted into the Metropolitan Free Hospital on Feb. 20th, 1879, under the care of Mr. Walsham, suffering from the above disease. It appears that about a week before, without any definite cause, he felt great pain in the left leg, which was followed by swelling. On admission the leg was found to be flexed slightly at the knee; the knee itself was hotter than its fellow, but not at all red; it was not painful on pressure, but on attempting to straighten the leg the boy cried out lustily. The affected knee measured ten inches round, whilst the sound one measured but nine inches. Martin's bandage was applied, the leg placed on a straight back splint, and perfect rest in bed enforced. The size of the knee steadily decreased until Feb. 27th, when it measured nine inches and one-eighth. The mother having insisted on taking the child home, he was accordingly discharged.

Since sending the previous cases to THE LANCET for publication, the following case of acute synovitis of right knee-joint, treated by Martin's bandage and terminating in erysipelas and death, has occurred:—

Joseph D—, aged forty-three years, a labourer, and a healthy-looking man, was admitted into the Metropolitan Free Hospital on March 5th, 1879, under the care of Mr. Goodsall, suffering from acute synovitis of the right knee-joint. It appeared that on the same morning he was at

work, when a hook struck him on the knee, and caused very acute pain in the joint. He continued at work for an hour after the accident, but, becoming very faint, he was brought to hospital. When admitted the joint was found to be hot, tense, red, swollen, and fluctuating, but without any external wound. It measured fifteen inches and a half round, whilst the left knee measured but thirteen inches.

The patient was placed in bed; Martin's bandage was applied from the foot to the middle of the thigh; a straight posterior splint was put on, and a smart purgative given internally. His temperature that night registered 103°; pulse 92.

As in the other cases, everything went well up to March 13th, when the knee-joint had decreased in size to thirteen inches and a half; but on that night he complained of a little pain in the thigh, and the next morning, on looking at the leg, it was seen that erysipelas had set in, extending from the knee to Poupert's ligament in front and over the gluteal muscles behind. Martin's bandage and the back splint were immediately discontinued, and the usual remedies for erysipelas adopted. He seemed to be doing remarkably well up to the 18th inst., when, about 12 o'clock that night, his pulse began to fail, and, sinking rapidly, he died four hours afterwards.

Unfortunately, no post-mortem could be obtained in this case, as it would have been especially interesting, there being no external wound, nor any cases of erysipelas either in the hospital or attending as extern patients.

A NOTE ON

VASO-MOTOR AND TROPHIC NEUROSES.

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WITH the advance of medical scientific knowledge we become daily more and more enlightened in regard to the causation of those vague and ill-defined forms of disease which are essentially due to some slight derangements of the nervous system. I make use here of the term "slight derangements" for the reason that they are sometimes associated with diseases which are accompanied by objective signs, and which can be readily recognised and classified under some specific heading. Let me be clearly understood. I do not wish it to be inferred from the above remark that I do not include under the heading of this communication those diseases which are known to us by the indefinite nomenclature which, from custom, we are compelled to adopt; such diseases, for instance, as diabetes, asthma, epilepsy, angina pectoris, and the, above all, vague and indefinite disease termed hysteria. I admit, however, that I should be extremely sorry to put forward any hypercritical remarks or suggestions relative to subjects concerning which, even at the present time, so little is known from a purely scientific point of view. Yet, on the other hand, pathology and clinical observation, with strict attention to the supreme laws of biology, are now accomplishing something like exactitude of definition and of truth.

Under the head of nervous disorders, embracing as the term essentially does not only our objective material and volitional parts, but also the correlation of these with subjective as well as mental morbid processes, we have a field for study and reflection, and a field in which the mind of man at present has made but little progress. The nervous system forms a chain of phenomena by which are linked together all the parts of our conscious and unconscious being, and it is impossible to say how far and by what means these parts are intimately associated.

We commonly speak in a ready and, I may say, off-hand way, of cerebro-spinal, sympathetic, vaso-constrictor, vasodilator, and trophic nerves, and we may, perhaps, in general not sufficiently appreciate medical scientific investigations, or hold in their due estimation medical scientific investigators. Yet, for medicine as an art, or rather a science, and for the bringing us into practical relationship with the causation of some of those obscure symptoms