

thighs. The hip and shoulder joints, as well as the knee and elbow joints, had been swollen and painful for years. That this atrophy, which may be due to an inflammation of the fine end twigs of the nerves, may also be caused reflexly by the joint affection has been shown by Charcot. If the hip joint is attacked, the flattening of the buttock, the abnormally high position of the gluteal fold, the marked prominence of the trochanter on that side, are striking features. If the upper extremities, especially the hands, are the seat of the disturbance, the atrophy gives rise to deformities which are either of the extensor or the flexor type (Charcot).

Peculiar and manifold are the manifestations of that variety of neuritis which is produced by the abuse of alcohol. For the sake of simplicity we may distinguish two cardinal forms of this affection, although the clinical pictures of the two can often not be well separated from each other. In the first the motor disturbances and the atrophies, in the second the sensory disorders, are the prominent symptoms. In the former case the patients complain of violent tearing and drawing pains in the lower, more rarely in the upper extremities, which are relatively rapidly followed by a marked difficulty in walking. The gait of the patient is distinctly ataxic and resembles most closely that of a tabetic, with the exception that in the latter no diminution in the strength of the muscles can be noted, while in alcoholic neuritis it can undoubtedly be demonstrated and is to be explained by the muscular atrophy which occurs comparatively early and which is particularly seen in the extensors. The degree to which walking in particular and motion in general is interfered with is very variable. Sometimes the patient can hardly raise himself in bed without assistance, sometimes he may for months be able to get about fairly well without help. It is interesting to note that the patellar reflex is lost very early and completely, a circumstance which may lure not the inexperienced alone into making a diagnosis of tabes dorsalis. This is still more likely to occur, and the mistake is more excusable, if the action of the alcohol has also manifested itself on the ocular nerves, so that, e. g., we may, in addition to the symptoms mentioned, encounter a paralysis of the abducens, which I have myself seen several times in alcoholic neuritis, and which Suckling (cf. lit.) and others have described; or, again, the oculo-motor may be affected and the patient may complain of diplopia. Pierson, Eisenlohr,

Strümpell, and others have reported cases in which the facial nerve was implicated. Vagus neuroses have been reported in this connection, especially tachycardia, by Dejerine. If we add to this the frequency with which Romberg's sign (swaying while standing with the heels and toes together and eyes closed, in consequence of the disturbance of the muscular sense) is found in the disease, if we remember that stomach symptoms occur in both affections—in alcoholism as vomitus matutinus in consequence of a chronic gastritis, in tabes as gastric crises in consequence of disease of the vagus nucleus—we can not be surprised at the frequency with which alcoholic paralysis is taken for tabes. Nevertheless, it is not so difficult to avoid such a mistake, more especially if we have a chance to examine the patient repeatedly and do it carefully enough. We should particularly note the condition of the pupils. The absence of the Argyll-Robertson sign and the absence of bladder symptoms, both of which are very common in tabes, will be significant features. In alcoholic neuritis, further, the nerve trunks are usually painful and the course of the disease differs in the two maladies. In tabes, as we know, the outcome is very unfavorable, while in alcoholic neuritis, if the cause is removed, it is usually good. Even the individual symptoms may, if analyzed carefully, give us some valuable diagnostic hints. For example, it will hardly be very difficult for the careful examiner to distinguish the morning vomiting of alcoholics from the paroxysmal spontaneous vomiting of tabes, which appears now and again and may not reappear for months.

The second form of alcoholic neuritis may run its course without giving rise to any decided motor disturbances. The patient then only complains of pains which sometimes run along the nerve trunks, becoming very violent, and may resemble the lancinating pains of tabes. He may complain of localized hyperæsthesias and anæsthesias, of formication and numbness, all of which symptoms are especially marked in the lower extremities. Various vaso-motor and trophic disturbances are not uncommon. Œdema may occur and disappear again, skin eruptions, perforating ulcers (Helbing, Beiträge zur klin. Chirurgie, 1889, v, 2), circumscribed areas of an hyperidrosis, and ichthyotic changes of the epidermis (Eulenburg) may be noted. Brissaud has published studies upon the influence of the trophic centres, especially in toxic neuritis (Arch. de Neur., 1891, xxi, 62).



In all cases the psychical condition ought to be carefully considered. It may present changes very early in the disease. Thus Oppenheim has reported instances in which the alcoholic neuritis occurred simultaneously with delirium tremens.

It has long been known that neuritis may be produced artificially, and that it, for example, often occurs as a consequence of subcutaneous injections of ether; but this has only been carefully studied of late years. Cases of this kind impress upon us the necessity of being cautious in giving the injections for therapeutic purposes and of avoiding especially a too deep insertion of the needle where we should be liable to strike branches of the musculo-spiral or other nerves. Paralysis of the extensors of the fingers has been relatively often observed. References bearing upon this subject will be found at the end of this chapter.

In the treatment of neuritis our first aim should be to remove the cause; only when this is possible can we hope for permanent results. The therapeutic measures differ according as the case is recent or of old standing. If the former is the case, the salicylates, antipyrin, phenacetin, and, if the pains are very intense, morphia are indicated. According to our experience, inunctions are of comparatively little value; nevertheless an ointment containing chloroform, veratrin, and morphia may be tried. Wet packs (Priessnitz bandages) are sometimes serviceable, and warm baths (at 90° to 95°) may be beneficial, but cold water is usually dreaded by the patients. The most important measure in these cases is the electrical treatment. Where this can not be used, or where it can not be properly applied, it is impossible to do much, and it is then best to leave the case to Nature, a course which frequently results in recovery, though this is apt to be slow. The constant and the combined current (De Watteville) should be used somewhat in the manner described for the treatment for the motor nerves in my Text-Book on Electro-Diagnosis and Electro-Therapeutics (Stuttgart, Enke, 1893, pp. 142, 143). Next to the correct application of electricity, the most important point to remember in this treatment is that we must not give it up too soon, and that we should not despair if at first no results can be seen. Several weeks, even two or three months, will be necessary in any grave case. Sometimes even the protracted use of electricity has no effect, and we may well say that the treatment of multiple neuritis is rarely a grateful task.

## LITERATURE.

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B. DISEASES OF THE TROPHIC AND VASO-MOTOR NERVES.

In spite of the epoch-making labors of Samuel (cf. lit.), who, after Romberg, was the first to postulate the existence of definite "trophic" nerve fibres for the regulation of the nutrition of the tissues, we are to-day still unable to demonstrate such fibres, nor do we know whether there exist purely trophic centres, or whether the trophic influence is exerted by some centres already well known—viz., by the motor, sensory, or vaso-motor. On the other hand, the existence of such a direct trophic influence of the nervous system upon the tissues can not be called in question! Again, we can not as yet decide whether or not this influence, upon which the nutrition of the