

PARALYSIS AGITANS.

By GUY HINSDALE.

ALTHOUGH Parkinson first published a minute clinical description of paralysis agitans nearly eighty years ago and although since his day some of our best neurologists have attempted to solve its problems, the disease is still classed among those of unknown pathology.

It would be a mistake to rest satisfied with the dictum of one of our most distinguished teachers who disposes of the treatment of this disease in five lines, stating that nothing can be done except to attend to the physical comforts of the patient. This is doubtless true in many cases, notably those occurring after hemiplegia.

A suitable *régime* is of the first importance in the treatment of paralysis agitans. The muscular weakness calls for the conservation of the patient's energies. On assuming charge of such a case, it will be wise to keep the patient in bed during the early portion of the day for several weeks and to endeavor to improve nutrition by food easily masticated and digested. Steady, patient, and persevering massage of enfeebled muscles will in great measure delay, if not prevent, the secondary peripheral changes that follow the central alterations of paralysis agitans. Trophic changes must be forestalled by rest, feeding, massage, and, if possible, electricity. Most of the patients are anemic, notwithstanding the red flush that may be seen upon the cheeks of some of them. Such an appearance is due to vaso-motor paresis and not to a generous arterial flow.

Iron carbonate and other chalybeate tonics, combined with arsenic and quinin, or the ordinary elixir of iron, quinin, and strychnin will be useful. The bowels should be watched and constipation avoided; sleep should be insured by the use of sulfonal, trional, and chloral, but not with morphin.

Whisky, ales, and malt have a distinct value in the supporting and nourishing treatment of cases of paralysis agitans.

Control of the tremor is, from the patient's standpoint, the great desideratum. In many cases hyoscyamus in some form restrains the tremor to an appreciable extent. A majority of patients are improved while taking the drug, but soon relapse when it is suspended. Beginning with 15 drops of the tincture three times a day, the dose may be gradually increased to a dram (4.) three or even four times daily. Of the fluid extract the dose will be from 5 to 15 minims (0.31-1.). I have had patients take this drug for upward of two years in full doses, entirely convinced that the tremor is in great measure

restrained by its use and conscious of no ill-effects; I can point to one case in which cure has apparently resulted. Hyoscyamin sulphate in doses of from gr. $\frac{1}{20}$ to gr. $\frac{1}{40}$ (0.00054–0.0016) or even gr. $\frac{1}{30}$ (0.0022) may be used by the mouth, or hypodermically if desired. This drug has the additional advantage of allaying mental excitement and promoting sleep. It is better not to use the amorphous form of hyoscyamin.

Conium and cannabis indica have also been found to control the tremor to a slight extent. When this symptom is not marked, sodium arsenate answers a good purpose as a tonic and seems to improve the general comfort of the patient. Beginning with from gr. $\frac{1}{80}$ to gr. $\frac{1}{30}$ (0.0011–0.0022) t. d. the dose may be cautiously increased. If the physiologic effect of arsenic should manifest itself by puffiness about the eyes, slight nausea, or diarrhea, the drug should be suspended, to be recommenced after a few days at the minimum dose.

As a substitute for morphin, I prefer to use codein sulphate, one grain (0.065) of which may be advantageously combined with hyoscin hydrobromate, gr. $\frac{1}{100}$ (0.00065), and may be given twice daily.

The secondary list of remedies used in the treatment of paralysis agitans, but of which for the most part I cannot speak from personal experience, includes atropin, barium chlorid, calabar bean, curare, ergotin, eserine, gelsemium, potassium bromid and iodid, strychnin, tincture of veratrum viride, and veratrin.

According to the reports of some of our leading neurologists electricity has been credited with a number of remarkable cures. W. A. Hammond gives to it his unqualified endorsement in these words: "I am very decidedly of the opinion that the best treatment consists in the use of the constant primary current to the spinal cord, sympathetic nerve, and the affected muscles, while at the same time strychnin and phosphorus . . . are administered internally. By these means four of my eight successful cases were entirely cured within two months." Dr. Landon Carter Gray is no less emphatic: "Galvanism is almost invariably of great value and it seemingly acts as a nervous stimulant of high order. It should be administered at least three times a week, with a large electrode placed on the nape of the neck and another opposite the lower dorsal spine. The skin should be wet with hot water and the electrode should be thoroughly moistened with the same. A current of from 3 to 5 milliamperes should be passed for from three to five minutes, and as the patient becomes accustomed to the current this may often be advantageously increased to from 10 to 15 milliamperes and to a sitting of from five to fifteen or even twenty minutes. With this treatment I positively assert that most cases of paralysis agitans can be controlled and the life of the patient made comparatively pleasant."