

pondent. Now, no matter how well such a mixture is shaken, the bulk of the bromoform would remain till the last dose. In the case referred to, the results which might have been anticipated did actually occur, viz.: no improvement in the disease, and a poisonous last dose. If given in water, the safer way is to drop the dose into a teaspoonful at the time of administration.

Glycerine is a much better solvent, but even some glycerine mixtures require thorough shaking before using.

Poisoning.—The fatal dose has not yet, so far as I know, been determined. Poisonous symptoms have, however, been observed after doses of 23 grains (minims?), and a drachm and a-half. The latter dose was taken by a girl of 2½ years. She, as well as all the others, recovered, and, apparently, without any unfortunate sequelæ.

In endeavoring to arrive at the truth of this question, Mr. President, I shall simply sum up briefly, and without recapitulating the evidence, by stating that bromoform—

(a) Reduces the number, and lessens the severity of the paroxysms.

(b) Rapidly relieves the vomiting.

(c) By thus quieting the stomach, it increases the digestive powers.

(d) Gives comfortable rest, and, in the doses stated, appears to be a perfectly harmless drug.

On the other hand, I do not think it is yet proved to be able to shorten the duration of an attack, and, as it acts only as an antispasmodic, not as an antiseptic, it cannot properly be spoken of as a specific for pertussis.

CEREBELLAR HEREDO-ATAXIA.

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In regard to the muscular sense (we have already seen that Romberg's sign was usually but little marked or absent) opinions differ somewhat; the majority of authors consider it if not intact at least scarcely altered; but Klippel and Durante state that in their three cases it was very notably deranged. The same difficulty of interpretation is met with when one seeks to explain

the mechanism of the motor troubles in typical Friedreich's disease.

The plantar reflexes are generally preserved, rarely exaggerated, sometimes abolished.

As for the organs of the special senses, apart from the eye, I have nothing notable to add, except in the three cases of Klippel and Durante, a diminution in the acuteness of the hearing, in one case of the same authors an impairment of the olfactory sense on the left side; in another case some slight changes in the taste.

In regard to the vision it is quite different. We must here consider in detail the muscular apparatus, the movements of the pupils and the vision properly so-called.

In two cases of Sanger Brown (IX and XVIII) there existed a quite pronounced *ptosis*, which, however, was incomplete, because, by an effort, at least in the second of these cases, the patient was still able to raise the eyelids, and uncover the sclerotic above the cornea when the eyes were directed horizontally. This incomplete ptosis gave to the patient a singular expression quite analogous to that induced by an intense emotion. In the cases of Klippel and Durante there was no question of ptosis, the eyes are described as wide open, but they note "the astonished appearance" of the facies.

In the greater number of cases one observes, not a true nystagmus such as is frequently seen in disseminated sclerosis, but *nystagmiform jerkings* which are present when the eyes are moved to an unusual degree in any direction. This is, however, a symptom which belongs equally to typical Friedreich's disease. A large number of cases have presented, in a more or less pronounced manner, a *paralysis of the right external rectus muscle*. Sometimes this is observed only by the tendency which certain patients have of moving their eyes in the same direction (above and to the left—Fraser) sometimes one notices a certain degree of internal strabismus, sometimes even a true *diplopia* which, however, is only transitory. It is further necessary to mention here, as quite frequent, a *difficulty in convergence*.

The pupils are usually equal without mydriasis or myosis, but their reactions are often defective. The light reflex is slow or even abolished (Sanger Brown), the accommodation reflex being preserved; there is then in these cases, as in ordinary tabes,