

The fourth case was in a male, of a highly neurotic temperament, suffering from neurasthenia from over-study. 25 gr. of sulphonal induced giddiness and ataxia almost invariably. In one case of ataxia there was also loss of the knee-jerk. It quickly re-appeared after the complete elimination of the drug.

Dr. Roddick had in his practice a case of very profound ataxia, following the administration of a 40 gr. dose of sulphonal.

It is an important point to decide, how is the sulphonal ataxia induced? Is it a cerebral or spinal ataxia? Judging from the loss of the knee jerk in the case referred to, it is probable that it is of spinal origin, and if so, we are brought face to face with an important problem—Is it possible for a permanent spinal degeneration to be caused by the long continued use of sulphonal.

We know that other hypnotics do, when long employed, induce changes—molecular and probably gross in the higher centres—and it is not at all unreasonable to believe that permanent organic change may be induced in one or other of the spinal systemic tracts. At present I am conducting a series of experimental investigations, with the object of endeavoring to prove whether it is possible for sulphonal to bring about changes of a sub-acute or chronic degenerative character in any of the spinal systems. At present it is well to be cautious in giving sulphonal for a long period, especially to patients who are apt to become ataxic from it.

*Action of Sulphonal on the Circulation.*—In not a single instance was there noticed any depressant action on the heart, even when given in the largest doses, and continuously for several nights. It is very well adapted therefore in the delirium of broken-down drunkards, a state where chloral is a dangerous remedy, owing to its powerful cardiac depressant action. Chloral not only acts directly on the heart muscle as a depressant, but it lowers the blood pressure also. A few cases have been reported where a depressant action on the heart has been observed to follow the use of sulphonal.

*Action on the Stomach.*—In only six cases was there any nausea or vomiting attendant on the administration of sulphonal.