

arms are heavy and hot, the legs cold and lifeless, and pupils contracted. These symptoms show that the hemp does not induce its dilating effects on the arterioles through a paralyzing effect on the general vaso-motor centre, but that its influence is exerted through the cervical ganglia and their cranial prolongations, or through the medullary centre in the dorsal cord. I have performed a number of experiments on rabbits with the object of watching what (if any) effects were produced by the hemp on the circulation in the ear and fundus of the eye. A dose of two grains was in seven experiments invariably followed by a perceptible dilatation of the vessels of the ear, and vessels previously invisible came into view. Temperature also increased. The vessels of the fundus of the eye also presented undoubted signs of enlargement. Ten grains proved fatal in a rabbit weighing 3 lbs., and on *post-mortem* there was found marked hyperæmia of the brain, but especially of the meninges.

Seeing that hemp is a vascular dilator, it would be indicated in those cases of hemicrania where there is arterial spasm, and it is in all probability only in those class of cases where we may expect benefit from its use. In the opposite class of cases, where there is dilatation of vessels—the neuro-paralytic variety of hemicrania—it would be unrationally therapeutics to order its administration. I have given a report of two cases of this nature where its administration did harm. From the well-known contractile effects of ergot on the arterioles, we would expect it to do good in this—the neuro-paralytic variety of hemicrania. Strychnia also would be indicated in this class of cases, for experiment has demonstrated that it has a marked effect in stimulating the vaso-motor sub-centres of the cord, as well as the general vaso-motor centre in the medulla. In fact it was through the physiological action of strychnine that the existence of vaso-motor centres in the cord was demonstrated.

Besides the two forms of hemicrania where the vaso-motor nerves play so prominent a part, there is undoubtedly a third class that are unaccompanied by any vaso-motor change. Unfortunately we are not able in every case to say what form of hemicrania we have to deal with, and have, in consequence, to