

6. *The same successful result* is to be expected from its administration in poisoning by the hard and tough *nux vomica*, which imparts the poison to aqueous fluids, but gradually and not very rapidly.

7. Tannin is a so much more valuable antidote in poisoning by strychnine, as *galls* in which it is contained can be readily procured, and thus be administered without much loss of time. They are easily reduced to a powder, which is given mixed with water. Another advantage is obtained by the vomiting which it is liable to produce. In the mean time, an *infusion* or *decoction* of powdered galls may be prepared.

On an average, Turkish galls contain fifty, the Illyrian galls twenty per cent. of tannin. At least one drachm of the former and two drachms and a-half of the latter are therefore required to neutralise one grain of strychnine introduced into the stomach, but in general, especially if there is vomiting, a much larger quantity should be administered.

8. Another readily obtained substance containing tannin is *Chinese tea*, the efficacy of which, in poisoning by strychnine, is confirmed by our experiments. But these experiments (VII. and VIII) have also shown that, in a decoction of tea-leaves, we cannot count upon the whole amount of tannin contained in them. In poisoning by a larger dose, it would therefore be necessary to administer so large an amount of green tea that the antidote itself might produce poisonous effects. One decigramme (1.3 grain of nitrate of strychnine requires, as our experiments prove, ten drachms (600 grains, 40 teaspoonfuls) of green tea, which, according to Peligot's analysis, contain about fifteen grains of caffeine. Tea is therefore applicable only in poisoning by smaller doses, but may otherwise be useful as adjuvant.

9. The efficacy of *roasted coffee* as chemical antidote to strychnine seemed to be much inferior. The amount of *caffeo-tannic acid* contained in coffee is, according to Payen, 3.5 to 5.0 per cent. But our experiments (IX., X., XI.) show that the decoction evidently contains a much smaller quantity of undecomposed tannic acid than this percentage would justify us in assuming. The decoction of 180 grains of roasted Cuba coffee (being adequate to 200 grains of the raw coffee, which should contain at least six grains of tannic acid) produced, according to the ninth experiment, merely a delay and diminution of the poisonous effect of 0.13 grain of nitrate of strychnine. In the tenth and eleventh experiments, 300 grains of raw coffee, which weighed, after roasting, 267 and 264 grains, and should have contained at least nine grains of tannic acid, had furnished a decoction which, as antidote to 0.13 grain of strychnine, was nearly inert, only delaying the appearance of the symptoms for a little while.

10. From *unroasted-coffee*, so inconsiderable an amount of tannin is extracted, by boiling, that the employment of its decoction for our purpose is out of the question.

11. *Oak bark* (of *Quercus robur* and *Q. pedunculata*) contains, according to Gerber, 8.5 per cent. of tannic acid, and imparts it readily to aqueous fluids. It deserves attention in poisoning by strychnine so much the more, as it can be procured without much delay, especially in the country. What has been said about the administration of galls equally applies to the use of the powder and decoction of this bark.

12. On account of their frequent occurrence and the large amount of tannin they contain, we have to mention in this connexion: *acorns* (from *Quercus robur* and *Q. pedunculata*) with 9 per cent., the *bark of the horse-chesnut* with 8 per cent., *willow bark* with 5½ per cent., and the *green hull of walnuts*. The *radix tormentillæ* (with 17 per cent.), *rad. caryophyllatæ* (with 31 per cent.), and *rad. bistortæ*, are still richer in tannin, but can rarely be procured without much loss of time.

13. The solubility of the precipitate produced by tannin in a solution of strychnine, by *acetic*, *citric*, and *tartaric acid* (vide experiments with the same), show the necessity of avoiding vegetable acids during the treatment of poisoning by strychnine with tannic acid.

14. The same applies to the internal use of *alcohol* and *alcoholic remedies*.

15. The reported experiments with rabbits have sufficiently proved that more active