VERATRIN.

Veratrin is brownish, insoluble in ether and in water, but soluble in alcohol. It fuses at 185° C. and is composed of 14 atoms carbon, 2 azote, 18 hydrogen, and 3 oxygen. Its action on the animal system is not yet ascertained. Strong acids decompose, and nitric acid changes it into oxalic.

Action of Veratria on Animals.

A very small quantity of acetate of veratria * injected into the nostrils of a dog immediately excites violent sneezing, which lasts sometimes nearly half an hour. One or two grains introduced into the mouth produce an abundant salivation which continues for some time. If the same quantities be injected into any part of the intestinal canal, on opening the abdomen to watch its effects, the intestine is observed alternately to contract and relax itself for a certain time: the portion of the mucous membrane, with which the veratria has come in contact is inflamed; the irritation extends and produces vomiting and alvine evacuations. In a larger dose it causes great hurry of the circulation and respiration, soon followed by tetanus and death. If one or two grains be injected into the cavity of the pleura or tunica vaginalis, the effect is still more rapid, tetanus and death ensuing in less than ten minutes. The same results follow in a few seconds, if the like quantity be injected into the jugular vein. Dissection shows that even in this case the veratria has acted on the intestinal canal, since the mucous membrane is found highly injected. The lungs also afford signs of inflammatior and engorgement.

* In my experiments on animals this preparation, being one of the most active, has alone been employed.

Action of Veratria on Man in Health or Disease.

The effects of a large dose of veratria on man have not been observed; there is no doubt they would be the same as those on animals. The taste of veratria is very acrid, but without bitterness; when taken into the mouth, in however small a quantity, it excites a very abundant salivation. Although entirely inodorous, the powder, if smelled too near, excites violent sneezing, which may even become dangerous. Swallowed in the dose of a quarter of a grain, it immediately causes diarrhœa, and in a little larger dose, vomiting more or less violent. I have lately given it to the extent of 2 grains in twenty-four hours, without producing too great an effect on the bowels. The patient was an old man, who had been struck with apoplexy some time before; this is an additional proof that the state of the nervous system has much influence on the operation of medicines: from having tasted, though cautiously, the mixture which contained these two grains of veratria, I experienced for several hours an insupportable acrid sensation in the mouth and pharynx, which had not entirely subsided by the following day; the patient experienced nothing of the kind.

Cases to which Veratria is applicable.

Veratria is principally serviceable in cases where it is desirable to effect a prompt evacuation of the bowels, and it has occasionally succeeded in expelling enormous accumulations of indurated fæces from the large intestine in old persons. In those pharmaceutical preparations of which hellebore and colchicum form the base, these substances ought to be replaced by veratria; such medicines would thus become more powerful, certain, and convenient in their operation, and Bacher's pills, the eau médicinale of Husson, and the tincture of colchicum, would cease to be the uncertain

remedies which practitioners have too often found them. The following are some of the formulæ intended to replace those of which we speak.

Pills of Veratria.

Veratria..... 1 — 2 grains.
Gum Arabic and syrup of gum sufficient to make 6 pills of each grain.

One of these pills may be administered at first, and if a purgative effect be not produced, three may be given in the course of a day. These pills may be advantageously substituted for those of Bacher.

Tincture of Veratria.

Veratria ..... 4 grains
Alcohol ..... 1 once.

Dose from 10 to 25 drops, in a cup of water. Internally it may be used instead of tincture of colchicum, in dropsy and anasarca, and externally by friction in the same maladies and in gout.

Solution of Veratria.

Sulphate of veratria ..... 1 grain
Distilled water ..... 2 onces.

This is a substitute for the eau médicinale. Dose, a tea-spoonful in one or two ounces of eau sucrée.

I have frequently successfully treated tic douloureux of the face, by producing small blisters, made along the course of the nerves with a grain or two of veratria, repeating the operation every four or five days. I have done the same with like success in palsy of the face.

Ointment of Veratria.

Veratria ..... 4 grains.
Lard ..... 1 once.

This may be used externally in cases of chronic rheumatism, anasarca, and gout.

Action of Sabadilline on the Animal System.

I have made a few experiments on this subject, but have seen nothing that should render sabadilline preferable to veratria in any circumstances.

[The observations of M. Magendie on the medicinal effects of veratria do not appear to have induced practitioners in this country to try them, or at least to publish the results of their trials, until Dr. Turnbull's *brochure* appeared in 1834. This gentleman has given us a series of cases of heart affections, neuralgia in varied forms, rheumatism, paralysis, dropsy, gout, amaurosis, &c. in which the external application of veratria appears to have worked astonishing effects. So applied, the patient generally experiences a considerable degree of warmth and tingling in the part, which are indicative of its operation; and if it be applied for a sufficient time to put the constitution completely under its influence, the feeling of heat and tingling extends over the whole surface of the body, and in some instances involuntary twitchings of the muscles of the mouth and eyelids are induced. Though the sensibility of the parts over which it is rubbed is increased to an extraordinary degree, the skin shows no mark of irritation, even after the friction has been continued for some length of time. It is a curious fact that though veratria, administered internally, causes the most violent cathartic and emetic effects, its external use induces constipation, and no effects whatever on the stomach, but causes a copious diuresis. For the details of the cases brought forward by Dr. Turnbull, I must refer the reader to his publication. I may mention that the doses he advises far exceed those of Magendie, the ointment being composed of from 10 to 20 grains of veratria to the ounce of lard, of which the size of a large nut is to be rubbed in night and morn-

ing. In dropsy the friction should always be made over the whole surface under which the effusion exists. Ovarian dropsy is the least tractable to its operation.

Dr. Turnbull gives a prescription for making pills of the tartrate of veratria, the proportion of the latter in each pill being one-sixth of a grain, which is to be taken every third hour, until the heat and tingling of the surface manifest itself. This internal employment of veratria applies to the same cases as its external application. Dr. Turnbull does not himself appear to have used the remedy internally.

Dr. Copland has been far from equalling the success of the author last named, in his employment of veratria; and indeed it is very probable that Dr. Turnbull has overrated the heroic qualities of the remedy. Dr. Copland has used it chiefly in painful affections; in rheumatism and gout he has found it of no avail, unless its application was accompanied with internal treatment of the digestive organs.

However useful, the exceedingly high price of veratria will probably, for a long time, prevent its general employment.—*Tr.*]

PRUSSIC OR HYDROCYANIC ACID.

In a memoir presented to the Academy of Sciences, in November, 1817, I made known the happy results which had followed the use of prussic acid, in diseases of the chest. The medicine has been since employed by a great number of physicians, both in Europe and America; its success has been uniform, and it may now be regarded as one of the most important of therapeutical agents.

Prussic acid was discovered by Scheele in 1780, but this chemist obtained it mixed with a variable quantity of water; M. Gay-Lussac first made us acquainted with it in a pure state.