

each surgeon-apothecary at least prepared a solution of acetate of morphia of determinate strength, and regulated his doses by it, rather than by the liquor opii sedativus, of which he can have no knowledge, until perhaps it has done mischief.—*Tr.*]

Extract of Opium deprived of Morphia.

A certain quantity of morphia always remains with the opium after the process for the extraction of that alkaline base. Taking M. Robiquet's hint on the subject, I made some experiments with the residue in question, and found that it still has a narcotic power, though much inferior to the common aqueous extract. Four grains are scarcely equivalent to a grain of the latter, and to a quarter of a grain of morphia.

NARCOTINE.

Though I have no reason to consider this substance in the light of a medicine, yet it may not be out of place shortly to give its physiological history.

Action of Narcotine on the Animal System.

One grain dissolved in oil induces in dogs a state of stupor, which might be mistaken for sleep, though from that it materially differs; for the eyes are open, the respiration by no means so deep as in sleep, and it is impossible to rouse the animal from his dull and stupid condition. Death generally supervenes within twenty-four hours.

Combined with an active acid, the effects are altogether different: animals bear as much as 24 grains without perishing; and while under its influence they are agitated by convulsive movements resembling those caused by camphor, together with the similar signs of fear, backward movements, the same incapability of pro-

gressing, the same foaming at the mouth, agitation of the jaws, &c.

I observed both the effects above described on administering a combination of morphia and narcotine to an animal. Having introduced a grain of morphia and the same quantity of narcotine dissolved in acetic acid, into the pleura of a dog, drowsiness, and, at intervals, some real sleep, were exhibited; while, at the same time, the stimulating effects of the narcotine were in curious combat with the effects of the morphia. This continued for more than half an hour, until at length the animal fell, under the sole influence of the morphia, into a profound sleep. It may be hence inferred that it is to the presence of both these principles in the aqueous extract that is owing the exciting property of that preparation.

M. Bally has given 60 grains of narcotine in 24 hours without fatal consequences. It would be well to ascertain whether the article he used was pure, and whether the whole was retained on the stomach.

Narcotine taken alone causes an unnatural brilliancy of the eyes, contraction of the pupils, and giddiness—signs of its strong exciting powers.

M. Liebeg's analysis of narcotine is

Carbon.....	65.00
Hydrogen	5.50
Azote	2.51
Oxygen	26.99

M. Pelletier's last analysis gives

	Atoms.
Carbon.....	65.16 = 17
Azote	4.31 = 1
Hydrogen	5.45 = 17
Oxygen	25.08 = 5

Narcotine may be obtained by making an ethereal tincture of opium, by which only the caoutchouc and narcotine are dissolved: it is subsequently purified with alcohol.