CHAP. XIII.

OF SIALAGOGUES.

Sialagogues are substances which increase the salivary discharge. This may be effected either by the mastication of substances, which, by their acrimony and pungency, excite the action of the vessels which secrete the saliva, or by the internal exhibition of certain medicines. Of the latter, mercury is the only certain sialagogue; and all its preparations, when administered in certain quantities, produce salivation to a greater or less extent.

As a class of remedies, sialagogues are of little importance. The sialagogue operation of mercury, it has already been remarked, does not appear essential to its efficacy in any disease, but is regarded merely as a test of the mercury acting on the system. The acrid sialagogues, by increasing the secretion of saliva, and by their pungency, sometimes relieve the pain of toothach, and have been supposed useful, by the derivation they occasion, in some kinds of headach.

SIALAGOGUES.

HYDRARGYRUS.
ANTHEMIS PYRETHRUM.
ARUM MACULATUM.
COCHLEARIA ARMORACIA.
DAPHNE MEZEREUM.
AMOMUM ZINGIBER.
NICOTIANA TABACUM.

HYDRARGYRUS. Quicksilver. (Page 212.)

No satisfactory explanation has been given of the peculiarity which mercury, under every form of preparation, has of exciting the secretion of the saliva. Some have remarked, that in consequence of the gravity of this metal, by which, when received into the circulation, it is disposed to retain the "direct line in which it is propelled from the heart, it is more certainly determined to the vessels of the head," a solution of the difficulty which is altogether absurd. It has likewise been supposed to

act by lessening the consistence of the blood, and disposing it to pass more easily into the salivary glands, so as to increase their secretion,—an opinion equally gratuitous and improbable. Dr Cullen endeavoured to solve the problem, by supposing that mercury has "a particular disposition to unite with ammoniacal salts, and that such salts are disposed to pass off by the salivary glands more copiously than by any other excretion." But mercury has no peculiar tendency of this kind; and if it had, these salts are not more abundant in the saliva, than in some other secretions. If another hypothesis might be hazarded, the following perhaps would afford some explanation of this singular property. The urine appears more peculiarly designed to convey matter which has been received into the circulating mass, but which is still excrementitious, from the system. To pass, however, with this fluid, it is necessary that the matter conveyed should be soluble in it; and when it is so, we can discover it in the secretion by chemical tests. If there is any property connected with it, therefore, which shall prevent this solubility, it probably will prevent the substance from being secreted. Now, the phosphoric acid, abundant in urine, must in this mode counteract the secretion of mercury in any form of preparation, by forming with it a compound insoluble, and to which the slight excess of acid cannot communicate solubility. The mercury, therefore, existing in the circulating mass, when brought, in the course of the circulation, to the secreting vessels of the kidneys, will not pass through their whole

course, but if conveyed so far as to be combined with phosphoric acid, will, from this combination, be incapable of being conveyed onwards, and will therefore be retained in the composition of that part of the blood which does not enter into the secretion, but returns into the circulation. It must be discharged by some other emunctory: a portion of it appears, from some facts, to pass off by the insensible perspiration; but the tenuity of this secretion, if the term may be employed, must be unfavourable to this mode of discharge. The salivary secretion is one by which it may be more easily transmitted; and this transmission may even be facilitated by the affinity exerted to the oxide of mercury by the muriatic acid, the soda and ammonia, which are the chief saline ingredients in saliva; for it deserves to be remarked, that triple compounds of these substances,—a soda-muriate, and ammoniaco-muriate of mercury, are to a certain extent soluble in water; and if the mercury is thus secreted, it will of course stimulate the secreting vessels through which it passes, and increase the discharge.

The increase in the salivary discharge, effected by mercury, is attended with pain and a sense of heat in the mouth, with softness and swelling of the gums, and sometimes with slight ulceration, or with a considerable degree of swelling, extending over the throat and face. These effects, when excessive, are best checked by the use of opium, of purgatives, of a blister applied to the throat, and, as Mr Pearson has recommended, free exposure to a cool dry air. From theory, the administration of sul-

phur, or sulphuret of potash, has also been recommended.

The remaining Sialogogues act only by topical application.

ANTHEMIS PYRETHRUM. Pellitory of Spain. *Syngenes. Polygam. superfl. Compositæ. Radix. South of Europe.*

THIS root, though cultivated in this country, is generally imported from Spain. Its taste is hot and acrid, its acrimony residing in a resinous principle, which alkohol dissolves, forming a very acrid tincture. It is a remedy which, from stimulating the salivary glands, and exciting a discharge of saliva, is used in toothach, and sometimes gives relief. It has also been chewed in palsy of the muscles of the throat.

ARUM MACULATUM. Wake-Robin. *Gynand. Polyand. Piperitæ. Radix. Indigenous.*

THE root of this plant, when recent, is extremely acrid; by drying, its acrimony is much impaired. In digesting it with alkohol, or with water, and evaporating either solution, an extract is obtained less acrid than the root itself, the vapour condensed has not much acrimony, and hence the principle in which this property resides appears to be one very easily decomposed. It resembles pellitory, and may be applied to the same purposes, but its pungency is unpleasant. Internally, it has sometimes been used as a stimulant in palsy and rheumatism.

COCHLEARIA ARMORACIA. Raphanus rusticanus. Horse-radish. *Tetradyn. Silic. Siliquosæ. Radix. Indigenous.*

THE root of this plant, when recent, has a penetrating taste, with a degree of sweetness. It excites, when chewed, a sense of heat, and a discharge of saliva. Its pungency resides in an essential oil, and is therefore lost by drying. Water and alkohol may be impregnated with it.

Horse-radish is a stimulant, which, as a sialagogue, has been used in paralysis of the tongue. It has also been used internally in paralysis and rheumatism, in asthma and dropsy, about a drachm of the recent root cut in small pieces being swallowed entire. Externally it has been applied as a rubefacient, and its syrup has been used as a remedy for hoarseness.

Offic. Prep.—Infus. Armorac. Comp. *Lond. Dub.*—Spir. Armorac. Comp. *Ph. Lond.*

DAPHNE MEZEREUM. Mezereon. (Page 415.)

THE bark of the root of mezereon has a very considerable degree of acrimony, so that when chewed it impresses a sense of heat and irritation in the mouth and upper part of the throat, and at the same time excites the salivary discharge. As a sialagogue, however, it is scarcely used.

AMOMUM ZINGIBER. Ginger. (Page 267.)

GINGER-ROOT, from its pungency, excites, when mas-

ticated, a sense of heat and increased discharge of saliva, and is sometimes, like other sialagogues, employed to relieve the pain of toothach.

NICOTIANA TABACUM. Tobacco. (Page 183.)

TOBACCO, when chewed, increases the action of the salivary glands, and the same effect is produced in the usual method of smoking it. Partly from this, and partly from its narcotic operation, exerted at the same time to a certain extent, it sometimes relieves, especially in the latter mode of using it, the pain of toothach, or of earach.