
CHAP. XIII.**OF SIALAGOGUES.**

SIALAGOGUES are those medicines 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 sialagogue; and such is the certainty of this operation of it, that 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, which are applied locally, by increasing the secretion of saliva, and by their pungency, sometimes relieve the pain of toothach; they have been supposed useful, by the derivation they occasion, in some kinds of headach; and their pungency has been supposed to operate with some advantage in paralysis of the tongue, or of the muscles concerned in deglutition.

SIALAGOGUES.

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

HYDRARGYRUS. Quicksilver. (Page 194.)

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 imperfect. 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 may 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 excrementitious, from the system. To pass with this fluid, it is necessary that the matter conveyed should be dissolved; and when it is so, we can discover it in the secretion by chemical tests. If there is any property connected with it which shall prevent this solution, this probably will prevent its secretion. Now, the phosphoric acid, which is 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, 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, but will be retained in the composition of that part of the blood which does not enter into the secretion, and return into the circulation. It must be discharged by some other emunctory: a portion of it appears 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. If the mercury is thus secreted, it will of course stimulate the secreting vessels through which it passes, and increase the salivary discharge.

The increase in this discharge, effected by mercury, is attended with pain and a sense of heat in the mouth, with softness and swelling of the gums, or even slight ulceration; sometimes 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 sulphur, or sulphuret of potash, has been recommended.

The remaining Sialagogues act by topical application.

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

THIS plant is cultivated in this country, but the root found in the shops is generally imported from Spain. Its taste is hot and acrid, its acrimony residing in a resinous principle, which alcohol 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. *Cynand. Polyand.*
Piperitæ. Radix. Indigenus.

THE root of this plant, when recent, is extremely acrid; by drying, its acrimony is much impaired. In chewing it, it impresses at first a sense of sweetishness, but soon afterwards of great acrimony on the tongue; and applied moist to the skin, it inflames or excoriates it. In digesting it with alcohol, 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. By merely washing the root, too, the acrid matter is removed, and a mild fecula is obtained. Arum 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. Indigenus.*

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 lost by drying. Water and alcohol may be impregnated with it, but it is lost by boiling; and by distillation with water a portion of oil is procured, pungent and acrid.

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 as a stimulating diaphoretic, in asthma as an expectorant, and in dropsy as a diuretic. Its dose is about a drachm of the recent root cut

in small pieces, and 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. Lond.*

DAPHNE MEZEREUM. Mezereon. (Page 405.)

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. A case of paralysis of the muscles of the throat, causing difficulty of swallowing, is related by Withering, in which, from chewing frequently small pieces of the mezereon, a cure was obtained.

AMOMUM ZINGIBER. Ginger. (Page 262.)

GINGER-ROOT, from its pungency, excites, when masticated, a sense of heat and increased discharge of saliva, and is sometimes, like other sialagogues, employed to remove the pain of toothach.

NICOTIANA TABACUM. Tobacco. (Page 167.)

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.