

**Justi Arnemann, M.D. in Academia Georgia Augusta Professoris Medicinae  
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## XV.

Justi Arnemann, *M. D. in Academia Georgia Augusta Professoris Medicinæ Pub. Commentatio de Aphthis, quæ ab Illus. Reg. Soc. Med. Parisiensi, xxv. Aug. 1787, palmam alteram obtinuit.* 8vo, Gottingæ.

THE dissertation now before us, as appears from the title, obtained for its author the honour of a prize-medal from the Royal Society of Medicine of Paris; and it will not be denied, that it contains many ingenious and important remarks, respecting a subject which deservedly claims the attention of every medical practitioner.

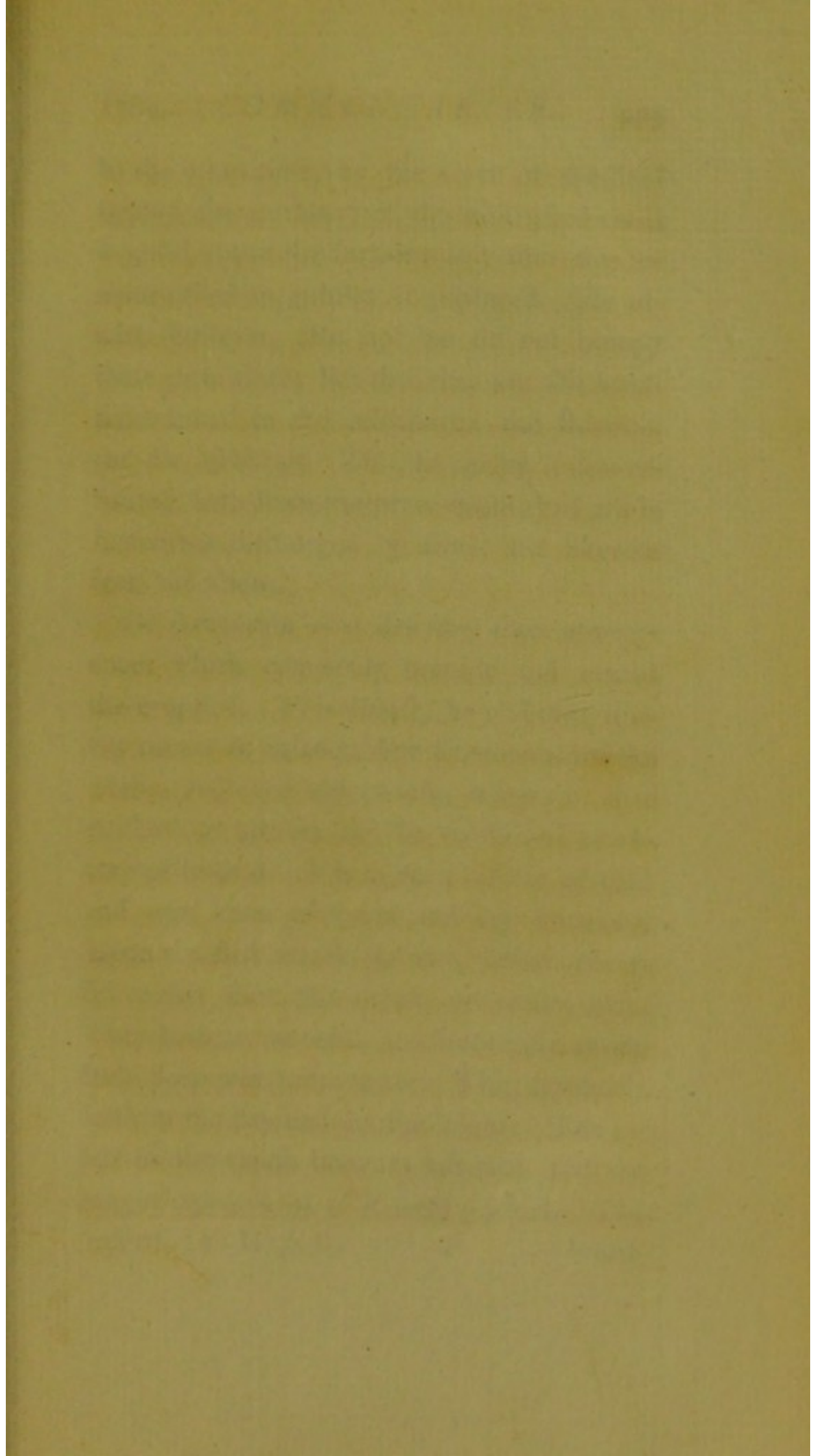
Dr Arnemann introduces this dissertation with some observations on the antiquity of Aphthæ, used as the name of a disease. After mentioning the different senses in which this term was employed by Hippocrates, Celsus, Galen, and other ancients, he observes, that



that Aphthæ were defined by Boerhaave to be small round superficial ulcers, occupying the inside of the mouth. Our author, however, objects to the appellation of ulcers, as they can by no means be said to yield pus. He thinks, therefore, that Aphthæ may be better defined to be, tumours of a white colour, or ash colour; superficial, round, and of a small diameter, so as scarcely to exceed the size of a millet or hemp seed, filled with a peculiar serous fluid, terminating in furfuraceous squamæ, and giving great pain. He observes, however, that he does not, by this definition, mean altogether to deny the existence of ulcerous aphthæ; but, while these are less common, they ought, he thinks with greater justice, to be numbered among the symptomatic aphthæ.

Respecting the seat of this disease, he observes, that aphthæ chiefly appear on the whole internal surface of the mouth, lips, gums, tongue, and palate, where these mucous cryptulæ are the most numerous, which pour forth a thin fluid for lubricating these parts. Aphthæ, he imagines, are formed, when this fluid, rendered more viscid than usual, cannot be propelled through the extremities of the ducts.

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breath is hot, and a sense of pricking heat is communicated from the mouth of the infant to the nipple of the nurse. The pulse is more quick than natural; and a slight degree of fever in general exists, which, however, in new-born infants, cannot easily be discovered.

During these symptoms, the cuticle becomes elevated in different places, and the aphthæ appear, principally on the tongue, the angles of the lips, and the fauces. As soon as they appear, they are filled with a thin fluid. This is, by degrees, converted into a thick, white, firm incrustation, which gradually covers the whole inside of the mouth, as far as it is visible. In point of colour, however, there is some variety. They are, in general, of a white or pearl colour; but, on the contrary, when they are so thick set as to give an uniform concrete appearance, they are, in general, of a yellow, brown, or even a blackish colour. Where the colour is white, the disease is the most favourable; on the contrary, the most dangerous appearance is a livid or dark purple hue. Their duration is very uncertain. Sometimes they fall off in one, two, or three days; but, in other cases, they remain firm for many days.

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When the crusts do fall off, a new danger often arises. The dilated vessels now transmit a greater quantity of fluids, from whence a copious salivation arises, sometimes even of a bloody tinge. The sides of the intestines are excoriated, from whence arise diarrhoea and dysentery; and even the softest food or medicine which can be swallowed, produces distressing hiccough, and even dreadful convulsions.

After this account of the symptoms, Dr Arnenmann next proceeds to treat of the causes of aphthæ. He considers impurities of the primæ viæ as a principal cause of this affection; and these, he thinks, may either be attributed to the neglect of proper evacuation after birth, or to a variety of circumstances which afterwards favour the generation of a colluvies; such as bad milk, or improper food of other kinds.

From these considerations, he is led in the prophylaxis, to recommend, above all other things, the greatest attention to cleanliness: Their linens, he observes, ought frequently to be changed, lest an absorption from the surface should vitiate the mass of fluids. It is also, he thinks, of great service, that the mouths of



infants be frequently washed with cold water. The meconium should be evacuated in due time; a diet should be furnished to the infants, suited to their tender age; and they should be entrusted to a careful nurse. But if, notwithstanding these precautions, gripes, and other signs of approaching aphthæ take place, the infant should be copiously supplied with liquids, or, if it be still upon the breast, liquids should be given plentifully to the nurse. The inside of the mouth should be carefully examined, and frequently washed and wiped, if white spots appear upon it: But, if such a progress has taken place, the disease will rarely be altogether prevented, unless recourse be had to purgatives, or emetics, which, by their concussion, may remove all the viscid matters.

In the cure, Dr Arnemann considers emetics as deservedly claiming a preference over every other remedy, while the fomes of the disease is still in the stomach, and when anxiety, hiccough, foetid eructations and vomiting are frequent. What he esteems the best emetic, is Huxham's antimonial wine. From five to ten drops will be a sufficient dose with an infant a few weeks old; and it may be increased



ed in proportion to the age. If the first dose do not operate, he advises that a second be given, at the interval of an hour, and thus repeated, till the desired effect be produced.

Purgatives also, are often, he observes, found to be productive of great benefit. Sometimes, however, he allows, a fatal hypercatharsis is produced. Care therefore should be taken, that they be not given when the intestines are in an excoriated state. But in the beginning and end of the disease, when the aphthæ are in the state of falling off, they are, he thinks, of great service in discharging these, and thus preventing the evils which might arise from their retention. The purgatives which he prefers are, those of a gentle and lubricating nature, and which at the same time possess a strengthening power; such as, the tincture of rhubarb with magnesia. These also, to avoid the danger of hypercatharsis, it is proper to employ in small doses, repeated at due intervals.

Among other aids, injections, he observes, are not to be neglected. These glysters may be composed of decoctions of burdock or grass-roots, of water-gruel, barley-water, milk and water, or the like; but, if the belly be very



bound, they may be sharpened by some purgative article.

Besides these, such medicines, our author observes, must be exhibited as forward the expulsion of the morbid matter. For this purpose, he recommends attenuant, demulcent, faponaceous and farinaceous drinks; such as, decoctions of the taraxacum, althea, fœniculum, acetosa, and the like.

The food of infants subjected to this disease, should, according to Dr Arnemann, be liquid, light, and mild; and, if the infant be upon the breast, the nurse should be supported on such food, avoiding all salted or high-seasoned aliment.

In some cases, particularly with very young infants, it is necessary that even medicines should be given to the nurse. And for this purpose, Dr Arnemann strongly recommends the medicine proposed by Dr Rosenstein, under the title of *Pulvis Nutricum*, which consists of equal parts of magnesia alba, orange-skins, fennel-seeds, and white sugar reduced to a fine powder; and of this as much is to be taken two or three times every day as can be lifted on the point of a knife. He advises also the  
copious



copious drinking of ptisans of barley or oats, infusion of linseed, or the like; and he recommends likewise the powder of rhubarb with magnesia, the active powers of which, he affirms, are communicated from the nurse to the infant by the milk.

While these internal remedies are employed, external assistance also is not to be neglected; for, by these, a more speedy discharge of the apthous crusts may be procured. Gargarisms and washes, however, intended to act upon the affected parts, are of but little use with infants, as they are immediately swallowed; but he strongly recommends a linctus, formed of honey, impregnated with the vitriolic acid, or with a solution of white vitriol; but after the apthæ have fallen off, and the parts below are excoriated and tender, he advises, that the applications be entirely of the mildest and blandest kind; such as, solution of gum-arabic, mucilage of quince-seed, syrup of poppies, and the like.

When the pain from the part begins to be diminished, he advises, that recourse be had to gentle astringents, by which the dilated vessels may be braced. For this purpose, he

P 4 recommends



recommends melrose or mulberry rob, acidulated with spirit of vitriol. Some, he observes, have recommended the decoctum corticis ulmi. But what he considers as entitled to the highest encomiums, are those linctuses into which borax enters, composed with syrup of poppies, raspberries, mulberries, or the like. But when these liniments are used, the mouth of the infant should afterwards be wiped and cleaned either with tepid water, or with any of the ptisans which have been already mentioned.

These remedies, he observes, will in general be sufficient for the cure of ordinary mild aphthæ. But before he concludes this subject, he offers a few observations respecting the treatment of symptoms with which even these are sometimes attended. For obviating hiccough, he recommends that opiates should be exhibited either to the mother or nurse; and the syrup of poppies mixed with the ptisan given to the infant. He recommends, that the diarrhœa, when violent, be counteracted by mucilaginous injection. Sometimes, he observes, it will be necessary to have recourse to opiates; but these, he thinks, should be used in a very sparing



sparing and cautious manner. If salivation be immoderate, it may be checked by the astringent injections already mentioned. When other diseases supervene on aphtha, these are to be treated in the manner best accommodated to the nature of the particular affection which may occur.

After these observations on aphthæ, occurring in their ordinary, and what may be called their mild state, Dr Arnemann next treats of the malignant aphthæ of hospitals, particularly of those hospitals fitted for the reception of infants. This species of aphtha has, he observes, at different times particularly prevailed in the hospitals at Paris. This disease in general appears a few days after birth. The mouth of the infant becomes gradually pale; it cries and complains almost incessantly both day and night; the body wastes, and the skin becomes flaccid; it is distressed with thirst, gripes, vomiting, and acid eructations. A continual diarrhœa is present, the stools being sometimes watery, sometimes of a greenish colour, and giving out a strong foetid or acid smell. In the mean time, fever is excited, the heat is increased, the pulse becomes frequent, and



and convulsions sometimes supervene. Small white tumours now become obvious on the lips, sometimes degenerating into real pustules. These by degrees affect the uvula, tongue, palate, tonsils, and the whole tract of the intestinal canal. Nay, even from the erosion of the fæces, pustules are discovered about the anus very much resembling aphthæ; and it is even not unfrequent for aphthæ to appear about the mammæ of the nurse. The malignant aphthæ are distinguished, by the symptoms preceding the eruption being numerous and severe; by their coming out very thick; by their being of a yellow, opaque, or brown colour; and when they fall off, new and thicker incrustations are immediately formed; and at length, general wasting of the habit, the Hippocratic face, and death, ensue.

It has been matter of dispute, whether the malignant aphthæ are to be considered as contagious or critical. Countenance is given to the former of these opinions, from their prevailing generally in those houses fitted for the reception of very young children; but this, our author thinks, may be sufficiently explained, from all the children in any one such house being



being subjected to the same treatment, whether good or bad. With still less reason can they, in his opinion, be styled critical, when it is considered, that from the timely use of evacuants, discharging the matter from the alimentary canal, they may be removed.

With respect to the cause of the malignant aphthæ, he observes, that if it be established by experience, that the general cause of aphtha is placed in impurity in the primæ viæ, and that the symptoms which accompany the malignant, such as anxiety, foetid diarrhœa, and the like, are the same with what occur in fevers from an affection of the alimentary canal; there can, he thinks, be little doubt in referring aphtha to the number of gastric diseases, and in concluding that these malignant aphthæ differ only from the common kind in degree; and this he ascribes to the treatment to which children must necessarily be subjected in those hospitals fitted for their reception.

In the prevention of the malignant aphthæ, Dr Arnemann advises, that, as soon as infants are received into the hospitals fitted for their reception, the impure colluvies be immediately evacuated. They should be furnished, if possible,



possible, with the milk of a woman newly delivered. If it be necessary to rear infants entirely upon the milk of other animals, he prefers the milk of asses, and, next to that, of mares. As far as other aliment is necessary, he prefers bread meat, to gruels immediately formed from farina; and he directs, that the greatest attention should be bestowed in the choice of good bread. He condemns, in the strongest terms, the practice of some nurses, of introducing the aliment into their own mouths, with the view of heating it, before they give it to the infant. In addition to these particulars, the greatest attention is to be bestowed on cleanliness. Infants should be frequently washed, their mouths, in particular, several times in the day; and great care should be bestowed, that both their bed and body linen should be clean and dry.

Free access should be given for the admission of air into the apartments in which they sleep; and on this account Dr Arnemann highly recommends the use of ventilators. The windows should also, he thinks, be opened daily, and impure effluvia corrected by aromatic fumigations, or by burning gunpowder in the apartments,



partments, the use of which he represents as highly efficacious.

In the cure of the malignant aphthæ, when the disease has already taken place in any infant, he directs that it should be immediately separated from the others; placed in a dry and airy bed-chamber; that its linens should be immediately changed; and if there be any reason to suspect a fault in the nurse, she should give place immediately to another, or the infant be supported upon the milk of domestic animals, or on other food.

Regard must also be paid to the evacuation of the alimentary canal; and with this view he recommends, as a very efficacious practice, the giving magnesia and rhubarb to the nurse. He advises, that the syrup of succory with rhubarb be given to the infant itself; or if it be somewhat advanced, the tincture of rhubarb with magnesia, in such quantities as gently to move the belly. The nurse must be copiously supplied with mild, bland diluents, shunning all acrid and salt food. Besides this, glysters are never to be neglected, which he considers as preferable to all other remedies in the treatment of malignant aphthæ. These, he thinks, should



should in general be prepared of mucilaginous decoctions alone; but if the belly be very bound, he thinks they may be sharpened by some purgative, such as tincture of rhubarb.

That the crusts of the aphthæ may sooner fall off, he advises the application of some detergent liniment, particularly of those which contain the vitriolic acid, or borax. When the aphthæ have a livid or black appearance, threatening a putrescent state, he advises that recourse should be had to a decoction of bark, and to an infusion of rue, serpentaria, or sage, with borax or with alum; and he likewise directs, that besides being taken by the mouth, these should be employed under the form of injection. He thinks also, that benefit may be derived from the use of fixed air.

When particular bad symptoms come on, as singultus, salivation, or the like, these are to be allayed in the same manner as in other cases. Some have recommended the use of blisters and of cordials; but Dr Arnemann strongly condemns both the one and the other; and thinks, that the only cordials which are admissible, are those which at the same time remove the cause of the disease.

After



After these observations on the malignant aphthæ, Dr Arnemann adds a few remarks respecting what he calls venereal and scorbutic aphthæ. In the first of these cases, he observes, that it is often difficult to distinguish the cause of the disease. They are chiefly, he thinks, to be distinguished, by the spreading of the ulcers, the fetor, and the affection of the bones. When the cause is manifest, he directs fumigation with mercury, or washing with a solution of corrosive sublimate. When a scorbutic diathesis appears, as indicated by stomaccace, fetor of the mouth, a livid colour, and other marks, he recommends the conjunction of antiscorbutic medicines with evacuates.

Dr Arnemann concludes this treatise with some observations on the aphthæ of adults; the aphtha febrilis of Sauvages and Sagar; the febris aphthosa of Selle. He tells us, that aphthæ in adults chiefly follow continued, putrid, or intermittent fevers, especially those autumnal fevers which begin with diarrhœa and dysentery; and he considers them as being particularly the consequence of warm regimen, or of the precipitate use of astringents, before  
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the fomes of the disease has been properly discharged by cathartics. These begin in the same manner as the aphthæ of infants, excepting that the preceding symptoms are more violent and numerous; which, indeed, infants cannot express in words. They are affected with nausea, perpetual anxiety, great pain and weight about the præcordia, dulness of the senses, and stupor. The eruption seems to rise up the course of the œsophagus: at length, they fill not only the mouth, but also the aspera arteria and nostrils.

The prognosis is chiefly to be drawn from the nature of the disease which they follow, and the strength of the patient. But it is always to be considered as unfavourable, when, upon their appearance, there is a recurrence of fever, the pulse becomes small, and the appetite fails.

These he considers as likewise arising from crudities and impurities in the primæ viæ, and as therefore requiring, in the cure, emetics and cathartics. Regard, however, must be had to the tendency of the disease which they have succeeded; and where putrid fevers have preceded, cathartics must be cautiously exhibited, or

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at least antiseptics conjoined with them, such as Peruvian bark, or the like. But besides this, he advises that recourse be also had to the internal and external remedies which have already been mentioned, and which it is here needless to repeat. In these cases, after the aphthæ have fallen off, acrid aliments and medicines are to be cautiously avoided, lest a fatal inflammation of the stomach or intestines should be produced. Care must also be taken, that the vessels be not constricted by cold air, or by cold drink; for of this, he tells us, a dangerous angina is often the consequence.



