ON SANTONINE AS A CAUSE OF URTICARIA.

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It not unfrequently happens that the medical man meets with unforeseen and disagreeable effects from remedies that he is in the habit of prescribing, owing to idiosyncrasies in his patients with which it was impossible to be previously acquainted. It would not be a work of supererogation to make a collection of instances in which familiar agents have produced peculiar and unexpected results, because they might serve not only as a warning, but also assist in elucidating with greater accuracy the *modus operandi* of the drugs which we use. These remarks apply to medicines upon which we daily rely, such as preparations of iron, quinine, opiates, the solanaceæ. But there are others that are ordered more sparingly; and, when their use is followed by unusual effects, our experience does not enable us to refer peculiar occurrences to analogous precedents. Such is the case with santonine, an agent long regarded as a good vermifuge, especially for ascariæ; but, as far as I can gather, not by any means so frequently employed as other agents belonging to the class of anthelmintics. My previous experience of this preparation has not taught me that it is in any way deleterious; nor, after numerous inquiries among my friends, do I find that they have met with unpleasant results from its use. Books speak of it as exercising an occasionally injurious irritant effect. My friend Dr. Garrod has referred me to a case given in the *Annales de Thérapeutique* for 1852, in which a child of four years old, after taking three grains of santonine, experienced severe abdominal pains, vomiting, purging, great prostration, cold sweats, spasms of the extremities, and dilated pupils; but ultimately recovered. Nothing of the kind has been observed by numerous friends whose opportunities of noting the effects of santonine have perhaps been larger than mine: I therefore think that the following account may not be without interest.

I recently prescribed for a little patient of four years old three grains of santonine with five of sugar, which were given to her with her tea; and the nurse was of opinion that she could not have taken the entire dose, as the cup was not emptied. Very soon afterwards, vomiting, accompanied by a severe rash, described as urticaria, and covering the greater part of the body, set in. I saw her soon afterwards, and found her somewhat prostrated by the attack, but otherwise presenting no unusual symptoms. As, on inquiry, it appeared that some error in diet had been committed, I was not disposed to attribute the effect to the santonine, and therefore ordered the dose to be repeated on the following day. Almost directly after taking the medicine (and this time, again, it is probable that only a portion was taken), a white wheal appeared on the nose, surrounded by an erythematous blush; and a similar eruption rapidly covered the body. Violent vomiting set in, but unaccompanied by abdominal or other pain, or by purging; and the entire face became swollen. This swelling attained such a height, that when I reached the house, within a quarter of an hour of the commencement of the symptoms, the child's face was disfigured to such an extent as to make her almost unrecognisable. The lips, from which some viscid saliva was still issuing, were swollen to an enormous size, glistening from the oedematous distension. The nose—at other times a delicate feature in a sweet little face—was enlarged to the size of a negro's; and the eyes were almost closed by the same condition of the lids. The intellect was unimpaired; and there were no spasmodic or other symptoms referable to the cerebro-spinal centres. I at once placed the child in a warm bath, which soothed her; and within an hour the oedema and the rash had for the most part disappeared. No further bad result followed; but, on the contrary, although no vermifuge effect was noticed, the child's appetite and general condition were improved on the following day, after a night of sound sleep.

It naturally suggested itself that the powder had not been properly made up; and that some ingredient, for or besides those ordered, might have been introduced. But an analysis, kindly made for me by Mr. Squire, satisfied me that there was no ground for this assumption, and that the effect could be attributed solely to the santonine. The analogy presented by the symptoms occasionally resulting from the use of copaiba, the consumption of honey, of shrimps, of mussels, of strawberries, assist us but little in the explanation of the occurrence; but it seems clear that the effect resulted mainly from a peculiar irritation applied to the pneumogastric and sympathetic nerves. The vaso-motor nerves were evidently largely implicated; but I do not remember ever seeing an instance in which so large an effusion of serum took place with the same rapidity, or disappeared as quickly. I may mention that this case has taught me that santonine is by no means as tasteless as

all the authorities within my reach tell me that it is. On the contrary, it possesses a well marked bitter flavour, which appears to be enhanced by the addition of sugar.

MUCOUS DISEASE.*

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THERE is reason to infer that mucus in an abnormal condition, or in an excessive quantity, may be produced on most, if not all, mucous surfaces. Andral, in his *Pathological Anatomy*, makes the remark that, in opening bodies, one is sometimes struck with the prodigious quantity of mucus on the internal surface of the stomach or intestines. He says, usually the mucous membrane is bright red, or it may be pale, without the least trace of injection; the increase of a secretion not necessarily inferring the formation of a sanguineous congestion in the secreting organ. M. Billard and M. Lélut have found membranes in which no trace of organisation could be discovered, in the mouth, pharynx, œsophagus, and stomach. I am at the present time attending a woman who, by a peculiar effort, which does not amount to a cough, brings up quantities of casts. Microscopically, they have the precise appearance of some of the specimens of casts from the colon. The total absence of fibrillated tissue enables me, of course, to distinguish them from the expectoration of a plastic bronchitis.

The structure and composition of these formations has been principally studied by Drs. Wilks and Clark, in England, and recently by Dr. Perroud of Lyons. Dr. Wilks and Dr. Andrew Clark made a most elaborate report on the microscopic appearances presented by these membranous shreds and tubes to the Pathological Society in 1857; Dr. Andrew Clark adding a supplementary note, in which he states that he has chemically and microscopically examined these pathological productions, and also preserved numerous specimens of them.

Dr. Perroud, in a contribution to the *Journal de Médecine de Lyons* for September 1864, gives the result of a carefully conducted chemical and microscopical investigation of these mucous concretions.

From the above-named sources, we shall be justified in stating that the characteristic discharge from the bowel may be divided into three stages:—

1. Masses of more or less inspissated mucus having the appearance of colloma or jelly. They are imperfectly membranous, and contain only the merest trace of albumen.

2. Tubular casts of the gut, which are veritable cylindrical sheaths, and also membranous shreds and flakes of various forms, which can be shown to be nothing more than fragments of the tubes in various stages of development. They have been compared to macaroni, vermicelli, and, according to Trousseau and others, from their slight resemblance to the *tœnia solium*, they have been mistaken for that worm. They sometimes present an irregular cribriform appearance, but by replacing the various branches you restore a perfect surface, which originally was evidently constructed in longitudinal stripes. M. Cruveilhier has seen them branched like the concretions formed in the bronchial tubes. These forms are membranous, and contain an abundance of albumen, but no fibrin.

3. Membranous shreds of lymph, mixed with blood and pus. This form contains both albumen and fibrin in abundance, the latter in a fibrillated form.

Dr. Andrew Clark observes that, differing in most respects, these three varieties of morbid product agree in this, that they all contain similar cell-forms; yet it is to be noticed that in the first variety there is no evidence of transudation or exudation; in the second, no evidence of a true exudation; and that in the third, in which the existence of a true inflammatory exudation is undeniable, the only additional structural element present is fibre. By the aid of a microscope, it appears that these membranes are formed in different layers; and, when they consist of more than one, we often find interposed between the laminæ particles of undigested food. The tissue of these membranes consists of an elastic, transparent, and structureless matrix, in which is embedded great numbers of spherical and cylindrical cells, the *débris* of these cells, free nuclei, crystals of the ammonia-phosphate of magnesia, and particles of incompletely digested food.

Dr. Perroud, from his chemical and microscopic study of these membraniform concretions, arrived at the conclusion that, in addition to a small quantity of albumen, they are formed of the same substance as that which enters into the composition of the epidermis. These membranous shreds and tubes are voided in lengths varying from a few inches

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