

a minimum of fermentable material in the shape of carbohydrates. He adds a very small amount of malt sugar, but no other kind of sugar.

Stolte, in his researches,<sup>1</sup> comes to the same conclusion, pointing out that the thriving of an infant is correlated with increased solidity of the motions, and that the latter is due to saponification and absence of fermentation.

If, therefore, fermentation is producing fatty acids, and thus preventing saponification, the continued use of aperients and antiseptics will not cure the condition without a radical alteration of the diet; and what a saving of suffering, time, trouble, and money if we can lay our hands on the main principle of the diet required!

It must be a great saving in money to poor people who are unable to breast-feed their infants if they can rely on cow's milk, either pure or manipulated in some simple manner, instead of experimenting with this, that, or the other proprietary food, at the least excuse, and to the probable detriment of the infant.

## REFERENCE.

<sup>1</sup> *Jahrb. f. Kinderh.*, 1911, No. 4.

## BORACIC ACID POISONING.

BY

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IN THE BRITISH MEDICAL JOURNAL of March 16th, 1912, Dr. J. Herbert Sanders describes an interesting case of dysentery, in which a repeated rectal wash of boracic acid caused symptoms of poisoning. This case is all the more interesting as the symptoms only came on after the irrigation of the bowel had been continued for some three weeks.

Professor Cushny, in his *Textbook of Pharmacology*, says that symptoms of poisoning with boracic acid, when absorbed from the alimentary canal, are:

Uneasiness in the abdomen, vomiting, diarrhoea, dryness of the throat, and difficulty in swallowing; sleeplessness, great muscular weakness and depression, dimness of sight and headache were also complained of, and in some cases collapse and death followed.

I formerly used boracic acid solutions for lavage of the bowel in cases of colitis, but, after having seen symptoms arise in at least three patients, decided it might not be such a harmless method as one would be inclined to believe. Although when used as an intestinal douche I have not found it to cause any serious symptoms, it has, apparently, frequently caused marked symptoms of toxæmia. It would appear probable that this poisoning, if in reality caused by boracic acid, is due to some idiosyncrasy, as one frequently sees cases in which lavage of the bowel with boracic wash has been carried out over a considerable period without any toxæmia, and I have never come across a case like that of Dr. Sanders, when the symptoms have developed later during the treatment.

## CASE I.

The first case I saw some fifteen years ago, in which a lady, with marked constipation, had colitis, passing large quantities of mucus, and sometimes membranes. The bowel was washed out with one-half saturated solution of boracic acid in the morning. A few hours later she became excitable, and complained of irritation of the skin, which in the afternoon became erythematous with some tendency to papules. The erythema was most marked over the chest and abdomen, and only slight on the limbs, but on the thighs there was some troublesome urticaria. This erythematous condition of the skin was accompanied by a considerable amount of mental irritability, the patient being fretful and seeming to exaggerate the amount of cutaneous irritation. The symptoms passed off in two days, the rectal washing having been discontinued. The symptoms, however, all recurred the following week when the boracic douche was again employed.

## CASE II.

The second case was also a lady who had simple colitis. In this case the erythema was even more marked, for it appeared over the whole body, and was accompanied by most marked urticaria. The mental excitement was so great that the patient insisted on walking about the room naked, declaring that even the nightdress increased the skin irritation, and for a time she behaved like a mad person. The urticarial wheals rapidly passed off, but the erythema lasted nearly four days, and the mental excitement continued more or less during the first two or three days, and was accompanied by insomnia.

## CASE III.

The third case was that of an elderly gentleman, suffering from dilated colon. The boracic acid rectal wash was here again followed in a few hours by considerable erythema, also accompanied with urticaria and mental excitement, which lasted nearly two days. This patient, some three weeks later, had copious melaena, followed by collapse. At the necropsy the hæmorrhage was found to come from a pedunculated polypus in the descending colon just above the sigmoid. There was no evidence of colitis, but an enormously dilated atonic colon.

It is of interest that in all these three cases the erythema was accompanied by urticaria and mental excitement, which rapidly passed off after the boracic lavage was stopped. The quantity of boracic acid absorbed from one or two lavages could not be very great, and consequently these patients must have had some special susceptibility, if these symptoms are to be considered due to the boracic acid poisoning.

In the first two cases I did not like to lay any special stress on the condition of mental excitement, as both patients suffered from neurasthenia and exaggerated everything, so that the fact of having an erythema which they could actually see and talk about was certainly made the most of.

The third case had not nearly as marked mental excitement. Although the patient was very restless and anxious about his condition, one certainly could not call him neurasthenic, so that it was possible that this condition of mind was due to the boracic acid.

The fact that the erythema occurred with boracic wash has now to be explained, and before one can definitely accept it as a true symptom of boracic acid poisoning I think more evidence ought to be obtained. It has to be remembered that in cases of chronic constipation, when there has been retention of fæces in the colon, it is not at all uncommon to see erythema accompanied by urticaria suddenly come on when these accumulations are disturbed and, so to say, stirred up. I have seen them occur when lavage of the bowel has been given, and when no boracic acid or possible poison was contained in the solution employed as the wash water—even in a case after a simple purgative was given by the mouth, and, as it did not act, was followed by a dose of castor oil.

In a case of this kind not only did erythema occur with considerable skin irritation, although unaccompanied by urticaria, but there was considerable mental excitement. I have always considered such cases as due to toxæmia arising from a sudden absorption of the products of putrefaction from the colon contents, which had been quiescent and hence unabsorbed. The simple douche or purgative causing a loosening of the mass, together with a solution of the poisons, which were then rapidly absorbed, caused the toxic symptoms.

It still is not clear to my mind that we are justified in considering these symptoms as really due to boracic acid poisoning, and they certainly do not correspond with the symptoms described by Professor Cushny. The article published by Dr. Sanders made me think it might be advisable to record these cases which had come under my observation.

## ACUTE EPIDIDYMITIS PRODUCED BY MUSCULAR STRAIN.

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UNTIL quite recently I had always been strongly of the opinion that an acute inflammation of the epididymis without concomitant orchitis must in every instance emanate from disease of the posterior urethra. From an anatomical point of view it is easy to understand how, by direct continuity, inflammation of the mucosa of the prostatic urethra may travel along to the epididymis, and the pathological changes evidenced by *post-mortem* examinations and the experimental investigations by Melassez and Terrillon (quoted by Finger<sup>1</sup>) show that the testicle proper is not involved in such cases. Consequently, one has been disposed to receive with absolute incredulity a patient's statement that the condition has been brought about by a strain. Lately, however, two