

mer diarrhœa, the usual classification of these cases is into simple diarrhœa, inflammatory diarrhœa and cholera infantum. The first two are very much alike, the difference being of one degree; in both, the disease is largely due to the local irritating properties of the bacteria. The extreme depression which is sometimes seen in these cases, often out of all proportion to what might be expected from the vomiting and purging present, and which may continue after these have ceased, and even cause death, are probably due to the absorption of some of the poisonous products of fermentation or putrefaction of the food substances present in the intestinal canal. In cholera infantum the cause is, no doubt, the absorption of poisonous ptomaines affecting principally the nervous system, probably the sympathetic.

Professor Vaughan has traced some of these cases to the poisonous action of tyrotoxinon or ptomaine discovered by him; he has been able to isolate it and finds that the symptoms which it produces when administered to some of the lower animals are identical with those of cholera infantum. It is found in connection with the butyric fermentation. I believe milk is the only culture in which it will grow. He considers it necessary to abolish milk entirely from the dietary in these cases.

The treatment of infantile summer diarrhœa is generally begun with a grain of calomel or gray powder, followed by a dose of castor oil to remove all irritating substances that may be present in the alimentary canal. When the stomach is very irritable a small mustard blister may be applied to the epigastrium for a few minutes. Ice in small pieces held in the child's mouth assuages the thirst. A linseed meal poultice to the abdomen has a soothing effect and protects from sudden changes of temperature. For the first twenty-four or thirty-six hours the diet should be restricted to barley water in small quantities, repeated as indicated. Some form of opium is generally required, Morphine being probably the best. Eustace Smith recommends that it be administered hypodermically.

The internal administration of antiseptics has many advocates; indeed, before bacteria were looked upon as the cause of this disease, the treatment had taken a distinctly germicidal tendency.

The preparations of mercury, calomel, bichloride

and gray powder are recommended for their antiseptic properties, in small doses, frequently repeated. Salicylate of sodium, naphthallin, creasote, carbolic acid and many others have been recommended, but the difficulty with all these is that the dose must be so small to avoid irritant or poisonous effects, that what is taken is so acted upon by the digestive fluids and other substances present, that they become so diluted as to be almost useless, or are entirely broken up into new compounds. Salol is said to decompose into carbolic and salicylic acids after reaching the small intestines; if this is the case, it should be particularly adapted to these cases. I believe the expectations which were entertained of it have not been realized, as it has been found to be very uncertain in its effects, sometimes producing wonderfully good results, at others producing no effect whatever.

Another remedy which possesses antiseptic properties, and owing to its insolubility acts as a protection to the inflamed mucous membranes, is bismuth in the form of the sub-nitrate or sub-carbonate. It is certainly a very useful remedy in these cases, and can be given in considerable doses to quite young infants.

Epstein recommends washing out the stomach by irrigation when the presence of irritating substances is indicated by nausea and vomiting.

Baruch recommends irrigation of the rectum and colon, with sterilized warm water, by means of a fountain syringe and long rubber tube with catheter attached, the infant being placed upon its abdomen, across the mother's knee, and the catheter being cautiously introduced till it reaches the flexure of the colon, he believes that the entire colon may be washed out by this means, thus removing bacteria and all irritating substances present. This should be a useful procedure, as by mortem examination in these cases it is found that the seat of greatest inflammatory action is the lower part of the ileum and the entire colon and upper part of rectum.

When the temperature in the rectum reaches 102° or 103°, cold sponging or even cold baths are recommended. In extreme prostration Eustace Smith recommends warm mustard baths.

With regard to the diet nothing but barley water should be given for the first twenty-four or thirty-six hours, then peptonized meat broths