

adding to the contents of the thirsty lymph ducts and empty blood vessels. Salts in a mild solution will thus be absorbed. Food must be more or less peptonized before being injected. The peptones mentioned above are readily absorbed when fairly diluted. When too thick they are not absorbed, become putrid, and a source of irritation. Milk ought to be peptonized. The white of eggs becomes absorbed through the addition of chloride of sodium. Kussmaul beats two or three eggs with water, keeps the mixture through twelve hours, and injects it with some starch decoction. The latter is partly changed into dextrin. Fat, when mixed with alcohol, becomes apt to be partly absorbed. Andrew H. Smith recommends the injection of blood. Its soluble albumen, salts and water are readily absorbed, more we ought not to expect. Still, he has observed that the evacuations of the next day contained none of the injected blood. Whatever we do, however, and be the rectum ever so tolerant, not more than one-fourth part of the food required for sustaining life can be obtained by rectal injections, and inanition will follow, though it be greatly delayed. Finally, children are not so favorably situated in regard to nutritious enemata as adults. In these the lengthening of the nozzle of the syringe by means of an elastic catheter permits of the introduction of a large quantity of liquid; indeed, a pint can be injected, and will be retained. But the great normal length of the sigmoid flexure in the infant and child, which results in its being bent upon itself, prevents the introduction of an instrument to a considerable height. It will bend upon itself; besides, a large amount of contents will be expelled by the feeble or resisting young patient. When a solid instrument is used, it is apt to be felt high up in the abdomen. This is the result of a large portion of the intestine being pushed upward.

#### Dilatation of the Stomach in Children.

Machon (*Centr. f. Kinderh. ibid.*):

This subject was extensively treated by Demme, and the author's observations have been made since that time. The anatomy of the child's stomach shows a relatively defective development of the fundus, great diameter of the cardiac orifice, and deep position within the abdominal cavity. These facts have an important bearing upon the capacity of the organ, and the influence which is exercised

by the condition of fulness and by the extension of its wall. Its histological structure also shows only slight development of the muscular coat, especially of the valve-like muscle of the pylorus. Upon the mucous membrane there is also a greater development of the mucous than of the peptic glands. In the new born infant the stomach is fixed only at its two extremities, the cardiac end being at the level of the tenth costal cartilage, and the pylorus not extending beyond the middle line of the body. When the organ is full the pylorus is its lowest point, and is always covered with liver tissue; the upper half of the lesser curvature runs parallel with the left side of the vertebral column, and its lower portion lies transversely across its anterior aspect. The angle which is thus formed varies greatly with the different movements of the organ. Dilatation of the stomach may be acute or chronic, and the chronic process may involve the whole or only a portion of the organ. There may also be a functional and an organic dilatation, and one which is due to primary diseases of its wall. Among the functional dilatations the most important is that which is based upon the disturbance of the nervous system. This may be a lesion of the central nervous system, for example, tuberculous meningitis, or hypertrophy of the brain; or the nerves of the stomach itself may be at fault. It may also occur in connection with chlorosis, the cachexias, or relaxation of the muscular structure in consequence of chronic catarrh. Secondary dilatation of the stomach of the organic variety rarely occurs. Narrowing of the pylorus is always the causative factor, and to this may be added a congenital weakness of the muscular structure of the organ. Imperfect development of the muscular coat and insufficient nutrition in the first months of life are also causative elements which occasionally exist. Cases are also recorded by Demme which were caused by keeping the child in bed too much of the time, and by rachitis, this disease being one which predisposes to disorders of the digestive tract.

The symptoms of dilatation of the stomach in children are partly local and partly general, and are similar to those which are observed in adults. The diagnosis can be readily made by inspection of the abdomen, by palpitation, or examination with a sound. Diagnosis by percussion is not always reliable.

Functional dilatation, which is caused by nerve disorders, usually disappears with the primary cause.