

RETROSPECT IN DISEASES OF CHILDREN.

T. WOOD CLARKE. *Amer. Jour. Med. Sci.*, May and June, 1909.

Clarke gives a useful review of medical literature on gastric digestion in infants and finally adds some of his own investigations in that subject.

Before the days of the stomach tube work was of but little value beyond that of Langendorff, demonstrating pepsin in the stomach of a dead foetus (1879). Work on autopsy material or on animals has not been of much assistance.

Kussmaul first used the stomach tube (on adults) in 1867, but it was not used on infants till Epstein showed its therapeutic value in 1880. Raudnitz first examined the stomach contents in 1887 though Leo in 1888 was the first to make systematic examinations in a large number (134) of cases. In 1889, Puteran published 1,027 tests in 248 normal infants. Since this date many publications have appeared chiefly on four details, viz.: motility, acidity, pepsin digestion, and rennin coagulation.

While there are many contradictory results, the following statements are apparently reliable, viz.:

All the factors present in the adult are found in a weaker form in the infant.

In the new-born at the breast the stomach empties itself in from one to one and a half hours, this time increasing with the age.

The few drops of juice found in the stomach before a meal are the remains of the previous meal and not a secretion.

The motility is more rapid in breast-fed than in bottle-fed infants and more rapid in the healthy than in the sick.

The acidity immediately after a meal is nil, but appears shortly and increases during digestion, being greater in older than in younger children. On a diet of barley-water free hydrochloric acid appears in several minutes, but on a diet of milk it does not show itself for an hour or more, the casein in the meanwhile absorbing the free acid. In disease the free acid appears later than in health. In pylorospasm the acidity is increased.

Lactic acid and volatile fatty acids probably do not occur in normal breast-fed infants, but are fairly common in artificially fed or sickly children. Part of the acidity is due to a fat-splitting enzyme in the stomach.

Pepsin is constantly present at all ages in health though to a slighter degree than in the adult. Peptic digestion goes on to peptones—not further. Stomach contents at times will not digest fibrin because the