

symptom of the latter. The low calcium form of rickets is, generally speaking, the rickets of tetany. Tetany may of course occur independently of rickets. If tetany persists long enough, however, evidence of defective calcification of the skeleton would almost certainly develop.

On theoretical grounds entirely, we think it possible that the rickets which develops in the youthful subjects of the severe functional derangements of the kidney may belong to the low calcium form of the disease; in other words, that the rickets in these patients may be truly endogenous in origin depending primarily on the inability of the kidney to excrete phosphorus. If this view proves to be correct "renal dwarfism"¹ is in reality renal rickets and ought so to be called and regarded.

73 (1820)

Variations in aliquot fractions of gastric contents.

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Aliquot fractions obtained by the Rehfuß method of fractional gastric analysis do not accurately represent the total gastric contents, as indicated by the results of the following experiments on subjects showing no clinical evidence of gastric disease:

1. Instead of the usual periodic aspiration, the total gastric contents were removed after three quarters of an hour by withdrawing 10 c.c. fractions in rapid succession. A wide variation was found in the acidity of these fractions, indicating that the total gastric contents are not a homogeneous mixture and that a single 10 c.c. sample is not a valid aliquot. This was more noticeable in subjects having a high rather than low gastric acidity.

2. (a) By inserting *three* Rehfuß tubes in one individual and aspirating the fractions simultaneously at fifteen minute intervals, it was found that there was considerable variation of acidity in different parts of the stomach at the same moment. X-ray pictures established the relative position of the tubes.

¹ Barber, Hugh. *Quart. Jour. of Med.*, 1921, xiv, No. 55.

(b) From these data it is shown that widely divergent curves of acidity may be plotted which depend entirely upon the experimental error of the method and not upon the subject's gastric condition.

(c) The inadequacy of the titration method and the importance of hydrogen ions and buffer salts in measuring gastric acidity is indicated.

3. A subject who could regurgitate his total gastric contents at will, was given the test meal on different days and the total contents were regurgitated at different intervals from the time of ingestion to the test meal. The curve of acidity plotted in this manner differed radically from the curve obtained in the usual manner. Furthermore, discrepancies were noted between the acidity of an aliquot removed immediately prior to regurgitation and the acidity of the total gastric contents.

Results obtained by the Rehfuess method may be more validly interpreted if: (a) the analysis is repeated until a satisfactory agreement in curves is obtained; (b) the tube is kept at a constant level; (c) aliquot fractions are large; (d) little saliva is swallowed; (e) acidity is measured in terms of hydrogen ions and buffer salts.

74 (1821)

The effect of cooking upon the antiscorbutic vitamin in cabbage.

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The present report is one of a series of studies undertaken to determine the effect of the new cooking implement known as the pressure cooker upon the vitamin content of such foods as are adapted to preparation in that device. The cooker also affords in its manipulation an opportunity to throw light on the response of vitamins to certain combinations of destructive influences that are absent or different from those met in older methods of cookery. The present study is confined to a comparison of the effects of pressure versus open kettle cooking on the vitamin C content of cabbage.