THESIS

on

CONSECUTIVE TESTS, by the FRACTIONAL METHOD of
GASTRIC ANALYSIS, in Seventy-Five Cases presenting
GASTRIC SYMPTOMS.

by

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APPENDIX.

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APPENDIX.

In this appendix the cases and the charts obtained as a result of the tests in these cases, are recorded. The cases are numbered I to LXXV and have been arranged according to the group diagnosis already referred to.

Since no attempt has been made in this thesis to correlate the clinical condition with the test meal findings, I have recorded only sufficient indication in each instance, to show the nature of the gastric symptoms. In each case therefore, the history symptoms, clinical examination, radiological report, and operation findings (when operation has been performed), are given only in so far as they refer to gastric symptoms.

The diagnosis has been recorded according to the group classification of dyspepsias, and the more comprehensive diagnosis, which has also been formed, has also been appended. No mention has been made of treatment, either medical or surgical, though in some cases the diagnosis has been formed only after/
after observation of the effect of certain treatment.

On the page facing each case the charts corresponding to the case have been placed. The charts from each case are numbered "a" and "b" representing first and second tests respectively. Where further tests have been performed at a later date, the additional charts are termed "c", "d", and so on, according to the order in which they were obtained.

The actual date of the test is recorded at the top right hand corner of each chart. The number at the top left hand corner refers to the Chalmers Hospital admission register. The curve of Total Acidity is indicated by a black line.

The curve of Free HCl is indicated by a red line.

The presence of starch in any sample is denoted by the letter "S", in purple, at the time period concerned.

Bile is noted similarly by "B", in green, Mucus by "M" in black, and Blood by "BL", in red.

The presence of charcoal in the resting content, is indicated by "C" in black, above the top left/
left hand corner of the chart.

Whenever it has been thought desirable to indicate the presence of any of the substances to a marked extent, the letters concerned have been underlined.

I have also indicated upon the charts, the amount, in cubic centimetres, of the resting content, and the residue, at two hours. These figures will be found at the corresponding ends of the curve of Total Acidity in each case.

The following plan shows the method by which particulars relating to the charts have been recorded in each case:

FRACTIONAL ANALYSIS CHARTS.

(1) Interval between the tests:— (in days).

(2) Behaviour of the patient towards the test
   (a) ........  (b) ........

(3) Type of curve  (a) ........  (b) ........

(4) Average Difference between the curves of acidity, in terms of cubic centimetres of NaOH per 100 cubic centimetres of contents.
   Free HCl ........  Total Acidity — ........

(5) Starch leaves the stomach at:— (a)..... (b)...

(6) /
(6) Charcoal in Resting Content:-(a).... (b)....
(7) Mucus:-(a) ...... (b) ......
(8) Bile observed:-(a) ...... (b) ......
(9) Blood:-(a) ...... (b) ......
(10) Resting Content:-(a) ...e.e. (b) ...e.e.
(11) Residue at Two Hours:- (a) ...e.e. (b) ...e.e.

In order to avoid unnecessary repetition the numbers (1), (2), (3) etc. only are given under the single heading of "Fractional Analysis Charts". Reference to the above plan will show the significance of these numbers in every case.
CASE I.

CHART a.

CHART b.
CASE I. Female - Aged 52.

HISTORY.

Had suffered from 'dyspepsia' since the age of sixteen, but in other respects health always good. Chief complaint was of a feeling of fullness in the stomach, unrelated to taking food, and of flatulence. She had never been free from trouble of this kind for any length of time, but only occasionally had discomfort been severe enough to inconvenience her seriously. She had never been jaundiced, and had experienced nausea only occasionally. Her bowels were inclined to be constipated, unless she took 'medicine' regularly.

Since widowhood, some twenty years ago, she had led a lonely life, and had not looked after herself at all well, and all her habits had become irregular.

EXAMINATION.

Revealed nothing abnormal.

RADIOLOGIST’S REPORT.

Rather large hypotonic stomach - emptying rapidly.

DIAGNOSIS.

'Habit Dyspepsia'. Bad feeding, irregular meals, too little exercise or occupation.

FRACTIONAL ANALYSIS CHARTS.

(1) 3 days.
(2) (a) Easy. (b) Easy.
(3) (a) Low Normal (b) Low Normal.
(4) Free Acidity = 4.7 Total Acidity = 5.4
(5) (a) 2 hours or more (b) 1½ hours.
(6) (a) Marked (b) Very marked.
(7) (a) A few flecks (b) Not observed.
(8) (a) 30 c.c. (b) 45 c.c.
(9) (a) 50 c.c. (b) 25 c.c.
CASE I.

CHART a.

CHART b.
CASE I. Female - Aged 52.

HISTORY.

Had suffered from 'dyspepsia' since the age of sixteen, but in other respects health always good. Chief complaint was of a feeling of fullness in the stomach, unrelated to taking food, and of flatulence. She had never been free from trouble of this kind for any length of time, but only occasionally had discomfort been severe enough to inconvenience her seriously. She had never been jaundiced, and had experienced nausea only occasionally. Her bowels were inclined to be constipated, unless she took 'medicine' regularly.

Since widowhood, some twenty years ago, she had led a lonely life, and had not looked after herself at all well, and all her habits had become irregular.

EXAMINATION.

Revealed nothing abnormal.

RADIOLOGIST'S REPORT.

Rather large hypotonic stomach - emptying rapidly.

DIAGNOSIS.

'Habit Dyspepsia'. Bad feeding, irregular meals, too little exercise or occupation.

FRACTIONAL ANALYSIS CHARTS.

(1) 3 days.
(2) (a) Easy. (b) Easy.
(3) (a) Low Normal (b) Low Normal.
(4) Free Acidity = 4.7 Total Acidity = 5.4
(5) (a) 2 hours or more (b) 1½ hours.
(7) (a) Marked (b) Very marked.
(9) (a) A few flecks (b) Not observed.
(10) (a) 30 c.c. (b) 45 c.c.
(11) (a) 50 c.c. (b) 25 c.c.
CASE II.

CHART a.

CHART b.
CASE II.  Male - Aged 18.

HISTORY.

Suffered from heartburn, flatulence, and vague discomfort in the stomach, which usually came on shortly after a meal. Had been troubled in this way for five years, with one attack of acute "indigestion" a year ago.

Discomfort became much worse about eight months ago, and this coincided with his becoming unemployed. At about the same time had all his teeth removed, and no dentures had been fitted. Bowels always constipated usually moved once only in four days.

EXAMINATION.

Failed to reveal any abnormality.

RADIOLOGIST'S REPORT.

Large dilated, but tonic stomach. No delay in emptying.

DIAGNOSIS.

'Habit Dyspepsia'. Constipation, poor feeding, lack of occupation, insufficient mastication.

FRACTIONAL ANALYSIS CHARTS.

(1) 1 day.
(2) (a) Very Difficult. (b) Easy.
(3) (a) Irregular. (b) Normal.
(4) F.A. = 15.9 Total Acidity = 12.9
(5) (a) 2 hours or more (b) 1 1/2 hours.
(7) (a) Marked throughout (b) Present towards end only.
(8) (a) in Resting Content (b) at end of 2 hours.
(9) (a) 15 (b) 40.
(10) (a) 65 (b) 30.
CASE III.

CHART A.

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CHART B.

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Gastric Analysis.
CASE III.

Male - Aged 37.

HISTORY. For a few years before the war suffered slightly from 'indigestion', with heartburn, and a feeling of fullness in the stomach. During war service experienced no trouble of this kind. But two years ago 'indigestion' returned and has gradually become more severe. During the past year had occasional attacks of vomiting, these have been associated with food, and usually relieved the sense of fullness in the stomach which preceded them.

EXAMINATION.

Revealed no direct evidence of organic disease. Repeated examinations of the faeces showed no occult blood.

RADIOLOGIST'S REPORT.

Hypertonic, very active stomach.

DIAGNOSIS.

'Habit Dyspepsia'. Unemployed, poor feeding. (But possible Duodenal Ulcer).

FRACTIONAL ANALYSIS CHARTS.

(1) 2 days.
(2) (a) Easily (b) Easily.
(3) (a) High Normal (b) High Normal.
(4) Free Acid = 4.0 Total Acidity = 7.1
(5) (a) 1 2/3 hours (b) 1 2/3 hours.
(8) (a) nil. (b) in resting content.
(9) (a) 67 c.c. (b) 35 c.c.
(10) (a) 33 c.c. (b) 50 c.c.
CASE IV.

CHART a.

CHART b.
CASE IV. Male - Aged 62.

HISTORY.

Health previous to one year ago good. A year ago began to be troubled by a vague discomfort in the stomach, unaccompanied by pain, nausea, or heart-burn, but associated with flatulence. This had increased on the whole, but was remittent in character. Three months ago was troubled by diarrhoea which persisted for some weeks. Appetite remained good but lost a little weight during the year. Had expanded his business just prior to the commencement of his trouble and was considerably worried about his affairs and had dropped into irregular habits as regards meals.

EXAMINATION.

Pulsation of the aorta was seen very clearly on the upper part of the abdomen, and there was some indecision about a tumour being palpable in this region. No occult blood in the faeces. No abnormality revealed by X ray examination.

OPERATION.

Laparotomy showed no pathological findings, and no evidence of tumour.

DIAGNOSIS.

'Habit Dyspepsia', irregular habits, worry, and anxiety.

FRACTIONAL ANALYSIS CHARTS.

(1) 2 days.
(2) (a) Easily (b) Easily.
(3) (a) Achlohydria (b) Achlohydria.
(4) T. A.= 5.6.
(5) (a) 1 1/2 hours (b) 1 hour.
(6) Charcoal in (a) trace (b) nil.
(7) (a) Very marked throughout (b) Marked.
(8) (a) nil. (b) Resting content and at end of test.
(9) (a) Flecks (b) Flecks.
(10) (a) 25 (b) 45
(11) (a) 15 (b) 30
CASE V. Male - Aged 41.

HISTORY.

For three years had experienced a feeling of fullness in the stomach, which usually came on shortly after meals, and lasted an hour or two. At first his symptoms were remittent, but more recently they have become regular, and discomfort in the stomach persists throughout the day, and is particularly marked towards evening. Recently heartburn began to trouble him, and he has 'burning' sensations in the stomach, which sometimes spread and involve the whole abdomen. He has had no nausea or vomiting.

EXAMINATION.

Revealed no evidence of organic disease. No occult blood found in faeces.

RADIOLOGIST'S REPORT.

Hypertonic stomach emptying rapidly.

DIAGNOSIS.

'Habit Dyspepsia'. Constipation, worry, irregular habits. [Possible Duodenal Ulcer].

FRACTIONAL ANALYSIS CHARTS.

(1) 3 days
(2) (a) Easy (b) Easy
(3) (a) Normal (b) High Normal
(4) F.A. = 16.6 T.A. = 15.1
(5) (a) 1 1/2 hrs. (b) 1 1/2 hrs.
(6) (a) nil (b) marked throughout.
(7) (a) Resting content (b) nil.
(8) (a) 35 c.c. (b) 65 c.c.
(9) (a) 40 c.c. (b) 50 c.c.
CASE VI.

CHART a.

CHART b.
CASE VI. MALE - Aged 34.

HISTORY.

Had experienced vague abdominal discomfort for many years, not related to food in any way, and localised to any one quadrant of the abdomen. During war service this abdominal discomfort had almost ceased to trouble him, but it returned soon after he left the army. Recently it has become more persistent, and is now accompanied by a feeling of flatulent distension in the stomach, which is worse for two or three hours following a meal.

His bowels have always been constipated.

EXAMINATION.

Revealed no organic disease.

RADIOLOGIST'S REPORT.

Large hypertonic stomach. No delay in emptying.

DIAGNOSIS.

"Habit Dyspepsia". Constipation, and too little exercise.

FRACTIONAL ANALYSIS CHARTS.

(1) 1 day
(2) (a) Easy (b) Easy.
(3) (a) High Normal (b) High Normal.
(5) (a) 1½ hours (b) 2 hours or more.
(8) (a) At irregular intervals (b) At irregular intervals.
(9) (a) Flecks (b) nil.
(10) (a) 85 c.c. (b) 80.
(11) (a) 60 (b) 60.
CASE VII.

CHART a.

CHART b.
CASE VII.

CHART a.

CHART b.
CASE VII. MALE — Aged 57.

HISTORY.

Had been in and out of many hospitals for vague feelings of discomfort in the stomach. Had always had this discomfort all his life. Very occasionally had attacks of nausea which lasted a week or two. Had never had any abdominal pain till recently when he began to be troubled by a burning sensation in the stomach which came on immediately after food.

Bowels always constipated, relieved at irregular intervals by violent purges. A labourer, his occupation was casual, and his conditions of living were continually changing with his employment.

EXAMINATION.

No organic lesion could be found.

RADIOLOGIST'S REPORT.

Large hypertonic stomach.

DIAGNOSIS.

"Habit Dyspepsia". Constipation, and irregular life.

FRACTIONAL ANALYSIS CHARTS.

(1) 2 days
(2) (a) Easy (b) Easy
(3) (a) Normal (b) Normal.
(5) (a) 2 hours or more (b) 1\(\frac{1}{2}\) hours.
(10) (a) 40 c.c. (b) 40 c.c.
(11) (a) 30 c.c (b) 50 c.c.

NOTE.

Chart c obtained twelve days later after regulating bowels, receiving tonic treatment.
CASE VIII.

CHART a.

CHART b.
CASE VIII. FEMALE - Aged 53.

HISTORY.

Began to be troubled by "indigestion" four or five years ago: first noticed a feeling of distension in the stomach, accompanied by flatulence. This has been remittent in character and she is always well when on holiday. Occasionally suffered from "biliousness" and feelings of nausea which would last a day or two, and then disappear entirely.

Three months ago discomfort in stomach became more marked and for a week she "vomited everything". Since then she has felt some tenderness in the abdomen.

Bowels always constipated, but more markedly so recently.

EXAMINATION.

Apart from slight tenderness on firm pressure in the epigastrium, no abnormality could be found. X-Ray examination showed a healthy stomach.

DIAGNOSIS.

"Habit Dyspepsia". Constipation, lack of exercise, and home worries.

FRACTIONAL ANALYSIS CHARTS.

(1) 1 day
(2) (a) Difficult and stilette employed (b) Still difficult.
(3) (a) Normal (b) Low Normal.
(4) F.A. - 12.2 T.A. - 5.2.
(5) (a) 1½ hours (b) 1½ hours.
(7) (a) Very marked throughout (b) Marked throughout.
(8) (a) At end of two hours (b) nil.
(9) (a) Flecks (b) Flecks.
(10) (a) 30 (b) 40.
(11) (a) 35 (b) 30.
CASE IX.

CHART a.

CHART b
CASE IX.  
FEMALE - Aged 65.

HISTORY.

For many years had experienced vague pains in all parts of the abdomen, and had always been troubled by flatulence.

Recently the whole abdomen had occasionally become very distended, and uncomfortable, and she would be constipated for several days before gaining relief.

A month ago had been troubled by a feeling of distension in the stomach coming on immediately after food, and accompanied by nausea.

EXAMINATION.

Revealed no organic disease. No occult blood found in faeces in repeated tests.

RADIOLOGIST'S REPORT.

Large low stomach, atonic. No delay in emptying.

DIAGNOSIS.

"Habit Dyspepsia". Constipation, and sedentary, self centred life.

FRACTIONAL ANALYSIS CHARTS.

(1) 4 days
(2) (a) Difficult & stilette employed (b) Easy.
(3) (a) Normal (b) Normal.
(4) (a) F.A. - 8.4 T.A. - 5.
(5) (a) 2 hours or more, (b) 2 hours or more.
(6) (a) Trace (b) Trace.
(7) (a) Resting Content & towards end of test (b) Resting Content.
(8) (a) Resting Content (b) Resting Content and at end of test.
(10) (a) 32 (b) 52.
(11) (a) 10 (b) 15.
CASE X.

CHART a.

CHART b.
CASE X.  
FEMALE – Aged 70.

HISTORY.

Had occasional attacks of indigestion for many years, usually associated with attacks of "Asthma". During these attacks she felt as if food lay like "a lump of lead" in her stomach. Between attacks slight vague discomfort in the stomach, and always trouble from flatulence.

Always very energetic and refused to consider her age, her life being occupied in visiting various members of her family in different parts of the country.

EXAMINATION.

Revealed no organic disease of abdomen. No occult blood was found in the faeces. X-Ray examination showed no abnormality, except slight visceroposis.

DIAGNOSIS.

"Habit Dyspepsia". Habits irregular, and too energetic for her age.

FRACTIONAL ANALYSIS CHARTS.

(1) 1 day
(2) (a) Easy (b) Easy.
(3) (a) AChlorhydria (b) Low Normal.
(5) (a) 1½ hours (b) 1½ hours.
(8) (a) Resting Content (b) Resting Content.
(9) (a) nil (b) later samples stained diffusely.
(10) (a) 25 (b) 45.
(11) (a) 15 (b) nil.
CASE XIII.

CHART a.

CHART b.
CASE XIII. MALE - Aged 48.

HISTORY.

Vague discomfort, and feeling of fullness in the epigastrium of many years duration. Unrelated to food, but always worse towards evening. Flatulence also present, but not a marked symptom.

During the war, and for a short time after it, when his employment gave him an open-air life he was quite free from trouble. But the discomfort returned as soon as he recommenced office life.

Bowels always tend to be constipated, but he can keep them fairly regular by physical exercises.

Appetite always particularly good.

EXAMINATION.

Revealed no abnormality.

RADIOLOGIST'S REPORT.

Large, low, hypotonic stomach. No delay in emptying.

DIAGNOSIS.

"Habit Dyspepsia". Lack of exercise.

FRACTIONAL ANALYSIS CHARTS.

(1) 1 day
(2) (a) Difficult (b) Easy.
(3) (a) Low Normal & irregular (b) Low normal.
(4) F.A. - 5.2 T.A. - 9.
(5) (a) 2 hours or more (b) 2 hours or more.
(7) (a) Resting Content (b) Resting Content
(8) (a) " (b) "
(9) (a) Flecks (b) nil.
(10) (a) 45 (b) 20.
(11) (a) 40 (b) 35.
CASE XIV.  FEMALE - Aged 29.

HISTORY.

Had always suffered from nausea, vomiting, and "indigestion" for a few days in association with premenstrual disturbance. During the past year this had begun to occur at other times as well, the vomiting being particularly marked. Constipation was very marked.

True history obtained with difficulty, and it transpired that patient was much worried about her condition, in view of her approaching marriage.

EXAMINATION.

No organic disturbance found, except a gynaecological condition.

RADIOLOGIST'S REPORT.

Showed nothing abnormal.

DIAGNOSIS.

"Nervous Dyspepsia". Worry, nervous exhaustion, constipation.

FRACTIONAL ANALYSIS CHARTS.

(1) 1 day
(2) (a) Easy  (b) Easy.
(3) (a) High Normal  (b) High Normal.
(4) F.A. - 5.5  T.A. - 7.4.
(5) (a) 1 1/2 hours  (b) 1 1/2 hours.
(9) (a) nil  (b) Flecks.
(10) (a) 30  (b) 60.
(11) (a) 30  (b) 30.
CASE XIV.

CHART a.

CHART b.
CASE XIV A. FEMALE — Aged 52.

HISTORY.

Since menopause had been subject to chronic ill-health. Had received many diagnoses at different hospitals e.g. Neuritis, Neurasthenia, Adiposa Dolorosa.

Gastric disturbance incidental, and the main complaint was of a "heavy feeling" in the stomach, as if the food did not pass on. Greatly troubled by flatulence, and occasionally "burning sensations" in the stomach.

Bowels usually regular, but occasionally attacks of lienteric diarrhoea.

EXAMINATION.

Showed no evidence of organic disease in alimentary tract. Well marked areas of hysterical anaesthesia.

DIAGNOSIS.

"Nervous Dyspepsia". Aerophagy and hysteria.

FRACTIONAL ANALYSIS CHARTS.

(1) 2 days.
(2) (a) Difficult, stilette used (b) Easy.
(3) (a) Normal (b) Low Normal.
(5) (a) 1 1/2 hours (b) 1 1/2 hours
(8) (a) Towards end of test (b) Resting Content & Irregular.
(10) (a) 20 (b) 25.
(11) (a) 10 (b) nil,
CASE XV.

CHART a.

CHART b.
CASE XV. MALE - Aged 47.

HISTORY.

"Indigestion" for many years, but free from trouble for a long period while on war service.

Chief complaint a great feeling of weight in the stomach at the end of the day, which continued far into the night and prevented him sleeping. Never actual pain, no nausea and no vomiting, though he often felt he would be relieved by vomiting.

Flatulence very marked and frequent loud eructations which worried him. Had become very worried about his condition which made his whole life very miserable.

EXAMINATION.

Revealed no organic disease, and X-Ray examination showed no abnormality.

DIAGNOSIS.

"Nervous Dyspepsia". Aerophagy, worry and anxiety, sedentary life.

FRACTIONAL ANALYSIS CHARTS.

(1) 4 days
(2) (a) Difficult (b) Easy.
(3) (a) Irregular (b) Low Normal.
(5) (a) 1¾ hours (b) 1¾ hours.
(7) (a) Resting Content (b) nil.
(9) (a) nil (b) Flecks.
(10) (a) 50 (b) 55.
(11) (a) 15 (b) 30.
CASE XVI.

Chart 6.
CASE XVI. FEMALE Aged 40.

HISTORY.

Prolonged history of vague abdominal discomfort, which had made life a perfect misery for the last fifteen years.

Bowels always very constipated, and great feeling of weight felt in different parts of the abdomen. Attacks of heartburn frequent, and very often appetite would be lost for months at a time, only returning with a "change of air".

Had seen many doctors, and had driven her relatives desperate by reason of her continual complaints.

EXAMINATION.

Apart from slight visceroptosis suggested by X-Ray examination no organic disturbance was found.

DIAGNOSIS.

"Habit & Nervous Dyspepsia". Constipation, lack of exercise and occupation. No family to look after. Anxiety state self centred.

FRACTIONAL ANALYSIS CHARTS.

(1) 2 days
(2) (a) Difficult (b) Difficult.
(3) (a) Normal (b) Low Normal.
(4) F.A. - 7 T.A. - 6.6.
(8) (a) 2 hours or more (b) 2 hours or more.
(9) (a) Flecks (b) nil.
(10) (a) 15 (b) 30.
(11) (a) 20 (b) 35.
CASE XVIII.

CHART a.

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CHART b.

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DOWN Bros., LTD., LONDON.

Gastric Analysis.
CASE XVII.  MALE - Aged 28.

HISTORY.

"Weak stomach" as a child. Since then he had always felt he had a "weak digestion" and was troubled by attacks of "distension of the bowels". Flatulence very marked, heartburn occasionally.

Bowels very constipated, and large doses of "medicine" taken irregularly. Patient had been reassured frequently that there was no cause for worry. But admitted that the slightest gastric disturbance worried him very much, and he was convinced he had a "tumour".

EXAMINATION.

Revealed no organic disease.

RADIOLOGIST'S REPORT.

Large atonic stomach. No delay in emptying.

DIAGNOSIS.

"Habit & Nervous Dyspepsia". Constipation. Anxiety state.

FRACTIONAL ANALYSIS CHARTS.

(1) 2 days
(2) (a) Easy (b) Easy.
(3) (a) Hypochlorhydria (b) Normal.
(4) F.A. - 20.4 T.A. - 16.5.
(5) (a) 1½ hours (b) 1¾ hours.
(8) (a) Resting Content & Irregular. (b) Resting Content & at end of test.
(10) (a) 20 (b) 50.
(11) (a) 25 (b) 27.
CASE XVIII.

CHART C.

Gastric Analysis.

DOWN Bros., LTD., LONDON.
CASE XVIII.

CHART a.

CHART b.
CASE XVIII.  FEMALE - Aged 32.

HISTORY.

Indigestion for many years: but quite free from trouble during the war while doing "land work". Feeling of weight in the stomach, heartburn, and flatulence - all marked symptoms.

Bowels always constipated. Had been treated by many doctors, sometimes for "too much acid", and sometimes for "too little acid".

Had become very worried about her own state of health, especially since she had been told "she probably had an ulcer".

EXAMINATION.

Showed slight tenderness in the epigastrium, but no other evidence to suggest organic disease. No occult blood in faeces. First X-Ray examination showed possible tumour, which was discounted by later examination.

DIAGNOSIS.

"Habit & Nervous Dyspepsia". Constipation, uncongenial occupation, too little exercise. Excessively worried about her own symptoms.

FRACTIONAL ANALYSIS CHARTS.

(1) 1 day
(2) (a) Easy  (b) Easy
(3) (a) Normal  (b) Alichlorhydria.
(4) F.A. - 17  T.A. - 8.6.
(5) (a) 1 1/2 hours  (b) 1 1/2 hours.
(7) (a) Marked throughout  (b) Resting Content.
(8) (a) Resting Content  (b) at end of test.
(10) (a) 45  (b) 20.
(11) (a) 25  (b) 30.

NOTE.

Third test performed two days later, showed result almost the mean of first and second tests.
CASE XIX.

CHART C.

OWNERS., LTD., LONDON.

Gastric Analysis.
CASE XIX.

CHART a.

CHART b.
CASE XIX. MALE - Aged 40.

HISTORY.

Feeling of discomfort and weight in the stomach after meals for last five years. Unaccompanied by flatulence, nausea, heartburn or any other gastric symptom.

Recently this feeling of weight had shifted to the lower part of the abdomen, and he had great difficulty in getting his bowels to move. He also complained of a great deal of "rumbling" in his bowels, and of slight discharge of slimy mucus from the bowels, though they remained constipated.

EXAMINATION.

No organic disease discovered, and no mucus discharge was found while in hospital. Sigmoidoscopic examination and X-Ray examination showed no abnormality.

DIAGNOSIS.

"Habit & Nervous Dyspepsia" Constipation excessive worry about his symptoms.

FRACTIONAL ANALYSIS CHARTS.

(1) 2 days
(2) (a) Easy. (b) Easy. (Had swallowed tube previously at another hospital).
(3) (a) Low Normal. (b) Achlorhydria.
(4) F.A. - 8.2 T.A. - 7.7.
(5) (a) 1 hour (b) 1½ hours.
(8) (a) Resting content & end of test. (b) nil.
(9) (a) Flecks (b) Flecks.
(10) (a) 60 (b) 40.
(11) (a) 40 (b) 45.

NOTE.

A third test, a fortnight later, showed almost a mean result from first and second tests.
CASE XXI. MALE - Aged 47.

HISTORY.

Abdominal discomfort for several years, not relieved by appendectomy three years ago. Chief complaint of a burning sensation up the whole right side of the abdomen, and in between the thighs. He also felt a great feeling of fullness in the right side, and in the stomach shortly after meals, no matter how little he took.

His bowels were regular as a rule, but occasionally he had some lienteric diarrhoea which would last for a few days and then clear up completely.

Greatly worried about the general condition of his health, as he was anxious to secure work.

EXAMINATION.

Revealed no organic lesion. No occult blood in faeces.

RADIOLOGISTS REPORT.

Large hypertonic, very active stomach emptying rapidly.

DIAGNOSIS.

"Habit and Nervous Dyspepsia". Unsatisfactory home conditions, worried and anxious about his own health.

FRACTIONAL ANALYSIS CHARTS.

(1) 1 day
(2) (a) Difficult, stilette used. (b) Easy.
(3) (a) High normal. (b) High normal.
(5) (a) 2 hours or more. (b) 2 hours or more
(7) (a) Resting content & end of test. (b) Resting content.
(8) (a) 55. (b) 35.
(9) (a) 30. (b) 30.
CASE XXI.

CHART a.

CHART b.
CASE XXI.  MALE - Aged 43.

HISTORY.

Troubled by flatulence for many years without any other gastric disturbance. Two years began to have occasional attacks of pain, and feeling of weight in the epigastrium. Coincided with an unhappy second marriage. Later attacks became more frequent, and he was unable to carry on his business about which he became very wriued. He had various hysterical manifestations such as temporary deafness, partial wry-neck.

Bowels always kept regular by 'medicine'.

EXAMINATION.

No organic lesion could be discovered. No occult blood in faeces. No abnormality seen by X-Ray.

DIAGNOSIS.

"Habit & Nervous Dyspepsia". Too little exercise, uncongenial home surroundings, - introspective - business worries.

F.A.C.

(1) 3 days
(2) (a) Easy. (b) Easy.
(3) (a) Low Normal. (b) Low Normal.
(4) F.A. - 7.1 T.A. - 5.4.
(5) (a) 1$\frac{1}{2}$ hrs. (b) 1$\frac{1}{2}$ hrs.
(6) (a) trace (b) nil
(7) (a) Resting content (b) nil.
(8) (a) Resting content (b) Resting content & end of test.
(9) (a) Flecks (b) Flecks.
(10) 'a) 35 (b) 35.
(11) (a) 35 (b) 25.
CHART a.

CHART b.
CASE XXII.  FEMALE — Aged 58.

HISTORY.

Had suffered from "abdominal tumours" for eight years. Reference to previous records showed that she had undergone three operations for Ovarian Cysts. For past year her abdomen had been painfully distended, and this was relieved only temporarily by tapping. During the distension she always suffered from nausea and vomiting, loss of appetite, and was troubled by a discharge of mucus from the bowels.

EXAMINATION.

Showed an ascitic abdomen, in which a large lobulated tumour could be felt. No occult blood found in faeces.

DIAGNOSIS.

"Toxic Dyspepsia". Malignant multilocular ovarian cysts.

FRACTIONAL ANALYSIS CHARTS.

(1) 2 days
(2) (a) Difficult (b) Difficult.
(3) (a) Achlorhydria (b) Achlorhydria
(4) Total Acidity 5.5.
(5) (a) 1½ hours (b) 1½ hours.
(7) (a) Marked throughout (b) Marked throughout.
(8) (a) nil (b) Resting content & at end of test.
(10) (a) 40 c.c. (b) 50 c.c.
(11) (a) 25 c.c. (b) 30 c.c.
CASE XXIII.

CHART a.

CHART b.
CASE XXIII.  MALE - Aged 59.

HISTORY.

Complaint of weakness, shortness of breath, cramps and tingling pains in arms and legs, loss of appetite, vague "indigestion" with a feeling of weight in the stomach after meals.

Considered by own doctor as possible carcinoma of stomach.

Duration of symptoms about eight months, and previous health good.

EXAMINATION.


DIAGNOSIS.

"Toxic Dyspepsia". Carious teeth and Pernicious Anaemia.

FRACTIONAL ANALYSIS CHARTS.

(1) 4 days
(2) (a) Easy (b) Easy.
(3) (a) Achlorhydria (b) Achlorhydria.
(4) Total Acidity 1.6
(5) (a) 1 1/2 hours (b) 1 1/2 hours.
(6) (a) Resting Content & End of test. (b) Resting Content & end of test.
(10) (a) 20 (b) 15
(11) (a) 35 (b) 10

NOTE.

Chart "c" obtained a fortnight later, and chart "d" eleven weeks later. Both these charts show similar appearances to first and second tests.
CASE XXIV.

CHART a.

CHART b.
CASE XXIV.  FEMALE - Aged 52.

HISTORY.

Weakness, anaemia, and severe abdominal pain of four months duration. Patient had lost appetite gradually, and while pain and discomfort in stomach were more or less constant, there had been two acute attacks of severe vomiting, and retching, lasting a week or more.

Previously patient had always had a "weak stomach", and suffered at intervals from attacks of vague "indigestion".

EXAMINATION.

Showed distended abdomen, containing some free fluid. A mass was felt protruding below the right costal margin, and tenderness was particularly marked over this mass and in the epigastrium. No occult blood in faeces.

DIAGNOSIS.

"Toxic Dyspepsia". Malignant abdomen, possibly malignant gall bladder and well marked secondary anaemia.

FRACTIONAL ANALYSIS CHARTS.

(1) 3 days
(2) (a) Difficult (b) Easy.
(3) (a) Achlorhydria (b) Achlorhydria.
(4) Total Acidity - 6.2.
(5) (a) 1½ hours (b) 1¾ hours
(7) (a) nil (b) slight.
(8) (a) Resting Content, & end of test (b) Resting Content.
(10) (a) 45 c.c. (b) 30 c.c.
(11) (a) 30 c.c. (b) 20 c.c.
CASE XXV.

CHART a.

CHART b.
CASE XXV. MALE - Aged 51.

HISTORY.

Loss of energy, cramps of legs, loss of appetite, nausea and occasionally vomiting, were the main symptoms. These had developed and progressed during the past eighteen months. During this period too, the patient's eyesight had become progressively worse.

The vomiting when it occurred took place first thing in the morning.

Bowels always constipated.

EXAMINATION.

Showed a neuritis involving both legs, and tenderness of leg muscles. Eye examination revealed tobacco amblyopia.

DIAGNOSIS.

"Tonic Dyspepsia". Alcohol and Tobacco in excess, confirmed by patient's own statement.

FRACTIONAL ANALYSIS CHARTS.

(1) 2 days
(2) (a) Easy (b) Easy.
(3) (a) High Normal (b) Normal.
(4) Free HCl - 9.1 Total Acidity - 10.2.
(5) (a) 1½ hours (b) 1½ hours.
(7) (a) Very marked throughout (b) Very marked throughout.
(8) (a) nil (b) Resting Content.
(10) (a) 39 c.c. (b) 34 c.c.
(11) (a) 45 c.c. (b) 20 c.c.
CASE XXVI.

CHART a.

CHART b.
CASE XXVI.  
FEMALE - Aged 55.

HISTORY.

About a year ago patient began to suffer from weakness, and shortness of breath, and swelling of the feet. A few months later she was troubled by attacks of nausea and vomiting, together with occasional pains in the epigastrium, and loss of appetite. Gradually her abdomen became "hard and swollen" and she began to vomit everything she took.

EXAMINATION.

Showed enlargement of the spleen, which reached the umbilicus, slight enlargement of the liver, and some tenderness and rigidity in the epigastrium. No occult blood was found in the stools. Blood examination showed evidence of a Splenic Anaemia.

DIAGNOSIS.

"Toxic Dyspepsia". Splenic Anaemia.

FRACTIONAL ANALYSIS CHARTS.

(1) 2 days
(2) (a) Difficult (b) Difficult.
(3) (a) Achlorhydria (b) Achlorhydria.
(4) Total Acidity - 4.
(5) (a) 1 hour (b) 1½ hours.
(7) (a) Mucus marked throughout (b) Mucus marked throughout.
(8) (a) Towards end of test. (b) Towards end of test.
(10) (a) 20 c.c. (b) 25 c.c.
(11) (a) 45 c.c. (b) 30 c.c.
CASE XXVII.

CHART a.

CHART b.
HISTORY.

Began to be troubled by vague abdominal pains about a year ago. These pains were most marked in the centre of the abdomen and on the right side, but appeared to spread to all parts. He had lost weight rapidly, and appetite was absent entirely. Recently he had become troubled by flatulence, and a great feeling of fullness in the stomach after food. Vomiting occurred not infrequently and gave temporary relief. Constipation had been a marked feature for many years.

EXAMINATION.

Whole abdomen very tender and rigid. Slight enlargement of liver. Marked secondary anaemia. Occult blood present constantly in faeces.

RADIOLOGIST'S REPORT.

Large atonic stomach, with irregular pylorus. No delay in emptying.

OPERATION.

Malignant growth, probably of transverse colon, but extensive secondary involvements.

DIAGNOSIS.

'Toxic Dyspepsia', Malignant Abdomen.

FRACTIONAL ANALYSIS CHARTS.

(1) 2 days.
(2) (a) Difficult  (b) Difficult.
(3) (a) Achlorhydria  (b) Achlorhydria.
(4)     Total Acidity = 3.5.
(5) (a) 1½ hours  (b) 1½ hours.
(6) (a) trace  (b) trace.
(7) (a) Marked  (b) Marked.
(8) (a) Resting content and at end of test  (b) similar.
(9) (a) Flecks  (b) Flecks.
(10) (a) 120 c.c.  (b) 45 c.c.
(11) (a) 30 c.c.  (b) 15 c.c.
CASE XXVIII.

CHART a.

CHART b.
Female - Aged 40.

CASE XXVIII.

HISTORY.

'Indigestion' for many years, all her life her stomach had been 'weak', and suffered frequently from 'bilious attacks'. She had been conscious of a constant feeling of weight in the abdomen for about ten years, sometimes this amounted to definite pain, and was associated with vomiting. Bowels always very constipated.

EXAMINATION.

Revealed well marked visceroptosis, which was confirmed by X ray examination. No other organic defect could be found, though there were areas of acute tenderness in the abdomen, but these were variable from day to day. Slight secondary anaemia.

DIAGNOSIS.

'Toxic Dyspepsia'. General visceroptosis, secondary anaemia, and constipation.

FRACTIONAL ANALYSIS CHARTS.

(1) 2 days.
(2) (a) Difficult (b) Difficult
(3) (a) Achlorhydria (b) Low Normal.
(4) Free Acidity = 9.5. Total Acidity = 8.2.
(5) (a) 2 hours or more (b) 1 1/2 hours.
(7) (a) Marked (b) Very Marked.
(8) (a) Resting content (b) Resting content.
(10) (a) 35 c.c. (b) 30 c.c.
(11) (a) 50 c.c. (b) 20 c.c.
CASE XXIX.

CHART a.

CHART b.
Female - Aged 43.

CASE XXIX.

HISTORY.

Severe 'neuritis' of various parts of body for many years, particularly marked on the right side. Recently patient had been troubled by discomfort, and a feeling of weight in the stomach. Heartburn very severe, and flatulence troublesome.

All the gastric symptoms were marked towards evening, and during the early part of the day she always felt well in this respect.

EXAMINATION.

Revealed no organic disease of the stomach or alimentary tract. There was no tenderness or rigidity in the abdomen, and rectal examination showed no pelvic tumour.

DIAGNOSIS.

'Tonic Dyspepsia', Focus not discovered, but probably associated with origin of the neuritis.

FRACTIONAL ANALYSIS CHARTS.

(1) 2 days
(2) (a) Easy (b) Easy.
(3) (a) Hypochlorhydria (b) Hypochlorhydria.
(4) Free Acidity =5.7. Total Acidity =7.2.
(5) (a) 2 hours or more (b) 2 hours or more
(8) (a) Resting content (b) Resting Content.
(9) (a) Flecks (b) Flecks.
(10) (a) 25 c.c. (b) 20 c.c.
(11) (a) 20 c.c. (b) nil.
CHART a.

CASE XXX.

CHART b.
Female - Aged 57.

CASE XXX.

HISTORY.

Several acute attacks of abdominal pain during the past year, mostly the pain occurred in the right iliac fossa.

Two months ago abdomen had begun to swell, and patient had become very jaundiced. At this time there had been a constant dull pain under the right costal margin, and across the epigastrium. Flatulence had become very troublesome, and occasionally there was some vomiting.

Previous to present trouble health had always been good except for marked constipation.

EXAMINATION.

Abdomen distended, showing free fluid. Marked tenderness in epigastrium and at right costal margin. No occult blood found in faeces. Blood examination showed secondary anaemia.

RADIOLOGIST'S REPORT.

Stomach appeared pulled over to the right. No delay in emptying.

DIAGNOSIS.

'Tonic Dyspepsia'. Possibly cirrhosis of Liver, secondary anaemia.

FRACTIONAL ANALYSIS CHARTS.

(1) 2 days.
(2) (a) Difficult (b) Easy
(3) (a) Achlorhydria (b) Hypochlorhydria
(4) Free Acidity = 9 Total Acidity = 4.
(5) (a) 2 hours or more (b) 2 hours or more
(8) (a) Towards end of test (b) Resting content and end of test.
(9) (a) Flecks. (b) nil.
(10) (a) 45 (b) 30
(11) (a) 25 (b) 15
CASE XXXI.

CHART a.

DOWN BROS., LTD., LONDON.

CHART b.

DOWN BROS., LTD., LONDON.

acidity

free HCl.

Gastric Analysis.
CASE XXXI.  FEMALE - Aged 53.

HISTORY.

Had suffered from abdominal pain and discomfort for about eighteen months. This had become progressively worse and patient had begun to lose weight rapidly.

Recently she had become very weak, and short of breath. Vomiting occurred occasionally, but was not marked. Appetite was poor, and there was a great feeling of weight in the stomach after every meal.

Bowels always constipated except for short attacks of diarrhoea which had occurred during the last two months.

EXAMINATION.

The abdomen was distended, and tender, particularly in the right iliac fossa: there was a little ascites.

Jaundice was slight, and blood examination showed a well marked secondary anaemia. Occult blood was found in faeces.

DIAGNOSIS.

'Toxic Dyspepsia'. Malignant Abdomen, probably malignant growth of large intestine.

FRACTIONAL ACID CHARTS.

(1) 1 day.
(2) (a) Difficult (b) Easy.
(3) (a) Achlorhydria (b) Achlorhydria.
(4) Total Acidity = 1.4.
(5) (a) 1½ Hours (b) 1½ hours.
(6) (a) Trace (b) Trace.
(7) (a) Slight (b) marked throughout.
(8) (a) Resting content and end of test (b) Resting content and end of test.
(9) (a) stained resting content (b) stained resting content.
(10) (a) 25 c.c. (b) 45 c.c.
(11) (a) Nil (b) 10.
CASE XXXII.

CHART e.

Gastric Analysis.

John Bros., Ltd., London.
CASE XXXII.

CHART a.

CHART b.

Gastric Analysis,
HISTORY.

Had always been anaemic, but recently this had become very much more marked. For the past year had suffered from shortness of breath, palpitation, weakness and swelling of the feet.

Gastric symptoms were not a very marked feature, she had lost her appetite, and had been troubled by flatulence recently. There was no nausea or vomiting, but she felt some slight sense of fullness in the stomach after every meal.

During the past year she had suffered from menorrhagia.

EXAMINATION.

Teeth all very carious. No organic disease of the alimentary tract could be found. No occult blood in faeces.

OPERATION.

(1) Hysterectomy for multiple uterine fibroids.

(2) Extraction of all teeth.

DIAGNOSIS.

'Toxic Dyspepsia'. Secondary anaemia, carious teeth.

FRACTIONAL ANALYSIS CHARTS.

(1) 1 day
(2) (a) Easy (b) Easy.
(3) (a) Achlorhydria (b) Hypochlorhydria.
(4) Free HCl-5. Total Acidity = 2.8
(5) (a) 1 1/2 hrs. (b) 1 1/2 hrs.
(7) (a) Marked throughout (b) nil.
(8) (a) Resting content (b) Content.
(10) (a) 30 c.c. (b) 70 c.c.
(11) (a) 35 c.c. (b) 30 c.c.

NOTE. Charts 'c', 'd', & 'e' obtained 11, 21, & 28 days later respectively. They approximate closely to the findings in 'a' and 'b'.
CHART e.

CASE XXXIII.

CHART d.

Gastric Analysis.
CASE XXXIII.

CHART a.

CHART b.
CASE XXXIII.  FEMALE - Aged 62.

HISTORY.

Complaint of weakness, loss of appetite, wasting, shortness of breath and slight cough, all of which had commenced about six months ago.

Previous health had been good in every way. These symptoms had become progressively worse, particularly the cough.

Recently she had been troubled by diarrhoea, and the bowels had been inclined to move after every meal.

EXAMINATION.

Well marked pulmonary tuberculosis. No evidence of involvement of bowel.

DIAGNOSIS.

"Toxic Dyspepsia". Tuberculosis and secondary anaemia.

FRACTIONAL ANALYSIS CHARTS.

(1) 1 day
(2) (a) Difficult (b) Easy.
(3) (a) Achlorhydria (b) Achlorhydria.
(4) Total Acidity - 4.
(5) (a) 1\(\frac{1}{2}\) hour (b) 1\(\frac{3}{4}\) hour.
(7) (a) Mucus marked throughout. (b) Mucus marked throughout.
(8) (a) At end of test (b) At end of test
(10) (a) 20 (b) 30.
(11) (a) 15 (b) nil.
CASE XXXIV.

CHART c.

XXXVIII 14

D. J. W. N. BROS., LTD., LONDON.

Gastric Analysis.

= acidity

= free HCl.

No ON
(% HCl)

0.36

10

20

30

40

50

60

70

80

90

100
Case XXXIV.

Chart a.

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Chart b.

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CASE XXXIV. FEMALE – Aged 41

HISTORY.

Present complaint was related to anaemia of rapid onset, and very extreme in degree. Patient was in a very collapsed condition when first seen, and repeated blood transfusion was employed.

Gastric symptoms, which developed during partial recovery from the anaemia, consisted of loss of appetite, feeling of distension in the stomach after food, slight colicky bowel pains after food, and inclination for the bowels to move.

EXAMINATION.

Showed a well marked Pernicious Anaemia. No organic disease of the alimentary tract could be found.

DIAGNOSIS.

"Toxic Dyspepsia". Pernicious Anaemia.

FRACTIONAL ANALYSIS CHARTS.

(1) 2 days
(2) (a) Difficult, stilette used (b) Easy
(3) (a) Achlorhydria (b) Achlorhydria.
(4) Total Acidity – 3.5
(5) (a) 1½ hours (b) 1 hour.
(8) (a) Resting Content & at end of test (b) Resting Content.
(10) (a) 60 c.c. (b) 50 c.c.
(11) (a) 20 c.c. (b) 40 c.c.

NOTE.

Chart "c" obtained three weeks later showed a similar result.
CASE XXXV.

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CHART a.

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CHART b.

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CASE XXXV.

MALE - Aged 29.

HISTORY.

Gradual onset of general ill health during the past two years.

Loss of weight, general lassitude and weakness marked symptoms. Cough with copious sputum for several months, and patient complained of general "aches and pains" in his chest.

Gastric symptoms slight, amounting to occasional attacks of vomiting. Appetite good.

Bowels very loose, and particularly inclined to move after meals.

EXAMINATION.

Pulmonary Tuberculosis in an advanced stage. But no organic involvement of the alimentary tract could be established definitely.

DIAGNOSIS.

"Toxic Dyspepsia". Pulmonary Tuberculosis, secondary anaemia.

FRACTIONAL ANALYSIS CHARTS.

(1) 1 day
(2) Easy (b) Easy
(3) (a) Achlorhydria (b) Achlorhydria.
(4) Total Acidity - 2.2
(5) (a) ½ of an hour (b) 1 hour.
(8) (a) Resting Content & irregularity through test. (b) Resting Content & throughout test.
(10) (a) 55 c.c. (b) 30 c.c.
(11) (a) 30 c.c. (b) 20 c.c.
CASE XXXVI. MALE - Aged 20

HISTORY.

About six months ago began to be troubled by a cough. This has become rapidly worse, and has been accompanied by wasting, loss of energy, and shortness of breath.

Patient has had several attacks of nausea and vomiting recently, and though his appetite has remained good, he has been disinclined to take food, since this produced a vague feeling of discomfort in the stomach, and set up slight colicy pains.

A few weeks ago suffered from diarrhoea, but the bowels have been regular since then.

EXAMINATION.

Advanced pulmonary tuberculosis. No organic involvement of the alimentary tract discovered.

DIAGNOSIS.

"Toxic Dyspepsia". Pulmonary Tuberculosis and secondary anaemia.

FRAGMENTAL ANALYSIS CHARTS.

(1) 1 day
(2) (a) Easily (b) Easily.
(3) (a) Hypochlorhydria (b) Low Normal
(4) Free HCl - 7.5 Total Acidity - 6.7
(5) (a) 2 hours or more (b) 1 hour.
(8) (a) Resting Content and end of Test. (b) Resting Content and irregular.
(10) (a) 30 c.c. (b) 30 c.c.
(11) (a) 25 c.c. (b) 20 c.c.
CASE XXXVII.

CHART A.

CHART B.
CASE XXXVII A. FEMALE - Aged 62.

HISTORY.

Perfectly good health till three months ago when she found she was very easily tired. Since then has complained of a feeling of weight in the abdomen, present constantly. She has been troubled occasionally by heartburn and feels as if food "lies too long on her stomach". Suffers from nausea very occasionally. Appetite has become rather poor, but she has not lost weight recently.

EXAMINATION.

Showed slight rigidity over the whole abdomen no tenderness.

Right kidney excessively mobile.

No occult blood found in faeces.

X-ray examination revealed no abnormality apart from general visceroptosis.

DIAGNOSIS.

"Toxic Dyspepsia". Visceroptosis and Constipation.

FRACTIONAL ANALYSIS CHARTS.

(1) 1 day.
(2) (a) Difficult stilette used. (b) Easy.
(3) (a) Hypochlorhydria (b) Low Normal.
(4) Free Acidity - 9.1 Total Acidity - 7.2
(5) (a) 1½ hours (b) 1½ hours.
(6) (a) Trace (b) Nil.
(7) (a) Marked (b) Slight
(8) (a) Resting Content (b) Irregular.
(9) (a) Flecks (b) Flecks.
(10) (a) 25 c.c. (b) 15 c.c.
(11) (a) Nil (b) 20 c.c.
CASE XXXVII.

CHART a.

CHART b.

DOW BROS., LTD., LONDON.
CASE XXXVII.  FEMALE - Aged 28.

HISTORY.

Two years ago patient had been operated on for appendicitis, a first acute attack. No further trouble till one year ago, when she suffered from acute gastro-enteritis which lasted several weeks. She made a complete recovery apparently, until three weeks ago when she was seized suddenly with acute abdominal pain, and violent vomiting.

Admitted to hospital she was operated on as possibly strangulated bowel.

No lesion of the nature could be found, and there appeared to be no abnormality apart from some slight congestion of the small Intestine. Following operation her symptoms cleared up, except for mild colicky abdominal pains made worse by taking food.

EXAMINATION.

No pathological lesion apart from a mild degree of enteritis discovered.

DIAGNOSIS.

"Toxic Dyspepsia". Origin unknown.

FRACTIONAL ANALYSIS CHARTS.

(1) 1 day
(2) (a) Easy (b) Easy
(3) (a) Low Normal (b) Normal
(4) Free HCl - 11 Total Acidity - 8.7
(5) (a) 2 hours or more (b) 2 hours or more.
(8) (a) Resting Content (b) End of test.
(10) (a) 30c.c. (b) 25c.c.
(11) (a) 54 c.c. (b) 45 c.c.
CASE XXXVIII.

CHART c.

CHART d.
CASE XXXVIII.

CHART a.

CHART b.
CASE XXXIX.

CHART a.

CHART b.
CASE XXXIX.

CHART a.

DOWN BROS., LTD., LONDON.
Gastric Analysis.

CHART b.

DOWN BROS., LTD., LONDON.
Gastric Analysis.
CASE XXXIX A. FEMALE - Aged 72.

HISTORY.

Had suffered from "chronic indigestion" for several years.

Her bowels had always been very constipated but this had become more marked recently.

Appetite was poor, and she complained of a vague feeling of fullness in the whole abdomen, accompanied by vague and unlocalised pains.

During the past year she had suffered from two attacks of acute pain, due to "kidney trouble". Apart from this there had been no vomiting.

EXAMINATION.

Showed an excessive mobile right kidney, but no other pathological lesion could be found. X-Ray examination showed marked general visceroptosis.

DIAGNOSIS.

"Toxic Dyspepsia". Visceroptosis, floating kidney, constipation.

FRACTIONAL ANALYSIS CHARTS.

<table>
<thead>
<tr>
<th>Fraction</th>
<th>1 day</th>
<th>1½ hours</th>
<th>2½ hours</th>
<th>At end of test</th>
<th>Flecks</th>
<th>36 c.c.</th>
<th>45 c.c.</th>
<th>25 c.c.</th>
<th>35 c.c.</th>
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<td>Free Acidity = 10.5</td>
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CASE XL.  

FEMALE - Aged 38.

HISTORY.

Patient had suffered from "mild indigestion" at infrequent intervals for many years. During the past two months she had had two acute attacks of this nature, accompanied by epigastric pain, tenderness, heartburn, flatulence and a feeling of weight in the stomach but no vomiting.

Prior to admission to hospital she had been seized suddenly by an attack of vomiting, and the vomit had been almost pure blood. Since then she had had no further complaint except for a slight flatulence.

Bowels always constipated.

EXAMINATION. 

No abdominal tenderness and rigidity. Occult blood no longer present in faeces after three weeks. Slight secondary anaemia. No pathological lesion seen radiologically.

DIAGNOSIS.

"Irritative Dyspepsia". Acute Gastric Ulcer.

FRACTIONAL ANALYSIS CHARTS.

(1) 2 days.
(2) (a) Difficult (b) Easy.
(3) (a) Irregular (b) Normal.
(4) Free HCl = 16.9. Total Acidity = 16.1
(5) (a) 2 hours or more (b) 2 hours or more
(6) (a) Trace (b) Trace.
(9) (a) Stained (b) Stained.
(10) (a) 60 c.c. (b) 50 c.c.
(11) (a) 40 c.c. (b) 30 c.c.
CASE XLI.

CHART a.

CHART b.

Gastric Analysis.
CASE XLI.  MALE - Aged 41.

HISTORY.

Pain after food for several years was the main complaint. This pain was situated in the epigastric region and varied in severity.

He had never vomited, but often felt he would be relieved if he could do so.

Flatulence was very troublesome, especially towards the end of the day.

He always felt hungry, and gained some temporary relief by taking food.

EXAMINATION.

Showed tenderness in the epigastrium, and definite rigidity of the upper part of the right rectus muscle. No occult blood found in faeces.

RADIOLOGIST'S REPORT.

Small hypertonic stomach, suggesting pylorospasm. Emptying rapidly.

DIAGNOSIS.

"Irritative Dyspepsia". Probably a duodenal ulcer.

FRACTIONAL ANALYSIS CHARTS.

(1) 2 days.
(2) (a) Easy (b) Easy.
(3) (a) Hyperchlorhydria (b) Hyperchlorhydria.
(4) Free HCl = 8.7  Total Acidity = 10.9
(5) (a) 1½ hours (b) 1½ hours.
(8) (a) nil (b) Resting Content & end of test.
(10) (a) 20 (b) 35 c.c.
(11) (a) 10 (b) 30 c.c.
GASTRIC ANALYSIS.

CHART a.

CHART b.
CASE XLII.

CHART a.

Gastric Analysis.

CHART b.

Gastric Analysis.
CASE XLII.  MALE - Aged 52.

HISTORY.

Discharged from the army healthy. Since then has always been troubled by vague abdominal pain, usually located in the centre of the abdomen, but often referred to the epigastrium, and right iliac fossa.

For weeks at a time he might be free from all trouble, his symptoms would then return. He had vomited several times during the pain. It seemed unrelated to food, and was not relieved by taking food.

Heartburn was an occasional symptom.

Bowels always constipated.

EXAMINATION.

Showed tenderness in various regions of the abdomen, most marked over the right iliac fossa. No occult blood in faeces. X-Ray examination showed no abnormality.

DIAGNOSIS.

"Irritative Dyspepsia". Chronic Appendicitis.

OPERATION.

Appendix showed chronic inflammation, no other abnormality could be found.

FRACTIONAL ANALYSIS CHARTS.

(1) 1 day
(2) (a) Difficult (b) Easy.
(3) (a) Normal (b) Normal.
(4) Free \(\text{HCl} = 4\). Total Acidity \(= 8.6\).
(5) (a) 1\(\frac{1}{2}\) hours (b) 1\(\frac{2}{3}\) hours.
(6) (a) Resting Content (b) End of test.
(10) (a) 35 c.c. (b) 30 c.c.
(11) (a) 40 c.c. (b) 20 c.c.

NOTE.

Charts "c" and "d" were obtained two months after "a" and "b", and preceded operation by a few days. In the interval medical treatment had proved unsuccessful.
CASE XLIII.

CHART a.

CHART b.
CASE XLIII.  MALE — Aged 50.

HISTORY.

Three months ago had been seized by an attack of acute epigastric pain, which was followed by vomiting of pure blood. Previous to this health always good. Since then he had been troubled by "indigestion". This was most marked towards the end of the day, and consisted in a feeling of weight and discomfort in the stomach. Pain was slight and only occasionally present, was always in the same spot, and was relieved by taking soda.

Flatulence had been troublesome for some time.

Bowels always regular, During the last two months he had noticed that his motions were sometimes like tar.

EXAMINATION.

No rigidity or tenderness could be found in the abdomen. No occult blood found in faeces while the patient was under observation.

RADIOLOGIST'S REPORT.

Large hypertonic stomach, suggesting pylorospasm.

DIAGNOSIS.

"Irritative Dyspepsia". Gastric Ulcer.

FRONTAL ANALYSIS CHARTS.

(1) 1 day.
(2) (a) Easy (b) Easy.
(3) (a) Normal (b) Normal.
(4) Free HCl = 11.2 Total Acidity = 12.
(5) (a) 2 hours or more (b) 2 hours or more
(7) (a) nil (b) Resting Content only.
(8) (a) Resting Content & end of test (b) Resting Content & irregular.
(9) (a) Flecks (b) Flecks.
(10) (a) 60 (b) 75 c.c.
(11) (a) 70 c.c. (b) 22 c.c.
CHART a.

Gastric Analysis.

CHART b.

Gastric Analysis.
CASE XLIV.  MALE - Aged 23.

HISTORY.

For two years had been troubled by abdominal pain, which occurred at intervals, and was unrelated to food, and not relieved by taking food. The pain was felt in the epigastrium chiefly, but sometimes spread and involved the whole abdomen. Some nausea and frequently vomiting accompanied the pain, which lasted two or three hours as a rule.

Appetite was always good. Bowels always regular.

EXAMINATION.

Showed slight tenderness in the epigastrium, and a definite tender area over the appendix. No occult blood found in faeces.

RADIOLOGIST'S REPORT.

Showed small hypertonic stomach suggesting pylorospasm.

OPERATION.

Appendix healthy, but several calcareous ileo-caecal glands. No other pathological finding.

DIAGNOSIS.

"Irritative Dyspepsia. Ileo-caecal glands involved.

FRACTIONAL ANALYSIS CHARTS.

(1) 2 days
(2) (a) Easy (b) Easy
(3) (a) Hyperchlorhydria (b) Hyperchlorhydria.
(4) Free HCl = 19.2 Total Acidity = 21.5.
(5) (a) 1½ hours (b) 1½ hours.
(7) (a) Resting Content (b) nil.
(8) (a) Resting Content & end of test (b) Resting Content & irregular.
(10) (a) 70 c.c. (b) 88 c.c.
(11) (a) 35 c.c. (b) 50 c.c.
Gastric Analysis.

CASE XLV.

CHART a.

CHART b.
HISTORY.

Four years ago experienced a sudden attack of very severe pain under the right costal margin. This had been accompanied by vomiting, and by jaundice. Since then she had suffered constantly from "windy dyspepsia". She had also had two acute attacks similar in nature to the first attack of severe pain.

Jaundice had never returned, but she suffered greatly from flatulence, and had a constant feeling of discomfort in the stomach.

EXAMINATION.

Showed tenderness, but no rigidity in the epigastrium. Bile was present in the urine. X-Ray examination revealed no abnormality.

OPERATION.

Showed chronic cholecystitis but no gall stones were found. No other organic disease was discovered.

DIAGNOSIS.

"Irritative Dyspepsia". Chronic Cholecystitis.

FRACTIONAL ANALYSIS CHARTS.

(1) 2 days
(2) (a) Difficult (b) Easy.
(3) (a) Achlorhydria (b) Achlorhydria
(4) Total Acidity - 4.
(5) (a) 1½ hours (b) 1½ hours
(8) (a) At end of test (b) Resting Content & end of test.
(9) (a) Flecks (b) nil
(10) (a) 15 c.c (b) 30 c.c.
(11) (a) 10 c.c (b) 25 c.c.
CASE XLVI.

CHART C.

Gastric Analysis.

Acidity

Free HCl.
CASE XLVI.

CHART a.

CHART b.
CASE XLVI.  Female - Aged 42.

HISTORY.

Patient had always been very healthy, and had had no digestive disturbance apart from slight flatulence, and very occasional attacks of heartburn.

Three days before admission to hospital she had vomited quite suddenly, the vomited matter contained a quantity of dark brown material; the following day she had again vomited a large quantity of bright red blood.

She had no complaint of pain or discomfort. Bowels always regular.

EXAMINATION.

Showed no area of tenderness or rigidity in the abdomen. The right kidney was freely mobile. No secondary anaemia was evident. Occult blood was found in the faeces for ten days. X-ray examination showed no abnormality.

DIAGNOSIS.

'Irritative Dyspepsia'. Acute Gastric Ulcer.

FRACTIONAL ANALYSIS CHARTS.

(1) 2 days.
(2) (a) Easy (b) Easy
(3) (a) Low Normal (b) Low Normal
(4) Free Acidity = 4.2 Total Acidity = 2.2.
(5) (a) 2 hours or more (b) 2 hours or more.
(6) (a) Nil. (b) (Resting content.
(7) (a) Fleck (b) Nil.
(10) (a) 25 c.c. (b) 45 c.c.
(11) (a) 40 c.c. (b) 60 c.c.

NOTE.

Chart 'c' obtained 12 days later, shows Hypochlorhydria, and stomach emptying in $1\frac{1}{4}$ hours.
CASE XLVII.

CHART a.

CHART b.
CASE XLVII. Male - Aged 50.

HISTORY.

For the past four years the patient had been troubled with abdominal pain. This became worse about two hours after food as a rule, it wakened him frequently at night. He had been unable to find anything which gave him relief. But the pain was always worse towards the end of the day. While on holiday his pain seemed less severe and less constant. He had never vomited, and his only other symptom was troublesome heartburn. His appetite had remained good, but he was afraid to eat. Bowels regular.

EXAMINATION.

Marked tenderness and rigidity over the upper part of the right rectus muscle. Occult blood found in faeces occasionally. X-ray examination showed a large hypertonic stomach, and an irregularity suggesting a duodenal ulcer.

OPERATION.

Chronic Duodenal Ulcer.

DIAGNOSIS.

'Irritative Dyspepsia'. Chronic Duodenal Ulcer.

FRACTIONAL ANALYSIS CHARTS.

(1) 2 days.
(2) (a) Easy (b) Easy.
(3) (a) Hyperchlorhydria (b) Hyperchlorhydria.
(4) Free Acidity = 11.7 Total Acidity = 10.7.
(5) (a) 1½ hours (b) 1½ hours.
(8) (a) At end of test (b) Resting content and irregular.
(9) (a) Nil. (b) Flecks.
(10) (a) 90 c.c. (b) 45 c.c.
(11) (a) 70 c.c. (b) 65 c.c.
CASE XLVIII.

CHART a.

CHART b.
CASE XLVIII. Male - Aged 55.

HISTORY.

Previous to three years ago patient had enjoyed good health. He had then had an 'attack of gall stones', this had cleared up fairly satisfactorily but the pain recurred about six months later. He was operated on & his gall bladder was removed.

A year later he began to be troubled by pain, which came on shortly after food, and lasted two or three hours. This pain was usually relieved by taking food, and did not inconvenience the patient until it began to waken him at night. He had no further symptoms until three weeks ago when he found he was getting very weak, and he noticed his motions were very 'tarry'.

EXAMINATION.


OPERATION.

Duodenal Ulcer, surrounded by extensive adhesions.

DIAGNOSIS.

'Irritative Dyspepsia'. Duodenal Ulcer.

FRACTIONAL ANALYSIS CHARTS.

(1) 1 day
(2) (a) Difficult, stilette used (b) Easy.
(3) (a) Hyperchlorhydria (b) High Normal.
(4) Free acidity =23.1 Total Acidity =18.2.
(5) (a) 2 hours or more (b) 2 hours or more.
(6) (a) present (b) present.
(8) (a) at end of test (b) Nil.
(9) (a) Flecks (b) Flecks.
(10)(a) 50 c.c. (b) 70 c.c.
(11)(a) 40 c.c. (b) 25 c.c.
CASE XLIX. MALE - Aged 21.

HISTORY.

Patient had had three attacks of acute pain in the right iliac fossa during the past year. Each attack had been accompanied by marked tenderness in this region by nausea, and by slight vomiting. After the last attack the pain and tenderness had subsided but there had been a constant feeling of discomfort in the stomach ever since.

This discomfort consisted in a sense of fullness in the stomach, which was sometimes associated with nausea. Appetite good. Bowels regular.

EXAMINATION.

Showed tenderness on firm pressure over the region of the appendix.

No other abnormality could be discovered clinically or by X-ray examination.

OPERATION.

Appendix chronically inflamed around a faecal concretion.

DIAGNOSIS.

"Irritative Dyspepsia". Chronic Appendicitis.

FRACTIONAL ANALYSIS CHARTS.

(1) 2 days.
(2) (a) Easy (b) Easy.
(3) (a) Low Normal (b) Hypochlorhydria.
(4) Free HCl = 8.3 Total Acidity = 8.8
(5) (a) 1½ hours (b) 1½ hours.
(8) (a) nil (b) Resting Content and end of test.
(10) (a) 20 (b) 25 c.c.
(11) (a) 30 (b) 40 c.c.
CHART C.

CASE L.

Acidity

= free HCl.

= free HCl.

DOWM BROS., LTD., LONDON.

Gastric Analysis.
CASE L.

CHART a.

CHART b.

Gastric Analysis.
CASE L.  

FEMALE Aged 32.

HISTORY.

Three years ago had been seized by a sudden attack of vomiting, during which she brought up a large quantity of blood. She had been well for eighteen months when she had again vomited up a large quantity of blood. Operation had been performed without pathological lesion being found.

A few days prior to admission she had again vomited up a large quantity of blood. She was very weak and anaemic. She had no gastric symptoms except slight flatulence. Bowels regular.

EXAMINATION.

No abdominal pain or rigidity.

Occult blood still present in faeces for one week following admission.

RADIOLOGIST'S REPORT.

Small atonic stomach, showing gastroptosis. No delay in emptying.

DIAGNOSIS.

"Irritative Dyspepsia". Gastric Ulcer.

FRACTIONAL ANALYSIS CHARTS.

(1) 2 days.
(2) (a) Easy (b) Easy.
(3) (a) High Normal (b) Hyperchlorhydria.
(4) (a) Free HCl = 8.7 Total Acidity = 9
(5) (a) 1½ hours (b) 2 hours.
(8) (a) Resting Content (b) nil.
(9) (a) Flecks (b) Flecks.
(10) (a) 70 c.c. (b) 90 c.c.
(11) (a) 20 c.c. (b) 20 c.c.

Note:— Chart "c", obtained twelve days later, showed High Normal curve, and stomach not empty in two hours.
CHART a.

CHART b.
CASE LI. 

MALE - Aged 22.

HISTORY.

Two years ago had begun to suffer from a feeling of fullness in the stomach. This was always worst towards evening. Occasionally, he had attacks of fairly acute pain, usually in the epigastric region which lasted a couple of days. He had never vomited, and only felt nausea in association with the acute pain.

Heartburn had been troublesome for years. Appetite good. Bowels regular. One year ago he had been operated on during an acute attack of pain, and his appendix had been removed, though he was told it was found to be healthy. This had not relieved his symptoms at all.

EXAMINATION.

No tenderness or rigidity could be found in the abdomen. No occult blood found in the faeces.

RADIOLOGIST'S REPORT.

Small hypertonic stomach, and possible Duodenal ulcer.

OPERATION.

No abnormality found, except calcareous and caseating caecal glands.

DIAGNOSIS.

"Irritative Dyspepsia". Possibly from inflamed ileo-caecal glands.

FRACTIONAL ANALYSIS CHARTS.

(1) 2 days.
(2) (a) Easy (b) Easy.
(3) (a) Hyperchlorhydria (b) Hyperchlorhydria
(4) *Free HCl = 12 Total Acidity = 12.2*
(5) (a) 1 1/4 hours (b) 1 1/2 hours.
(8) (a) Resting Content & end of test (b) Resting Content and Irregular.
(9) (a) Flecks (b) Flecks.
(10) (a) 60 c.c. (b) 80 c.c.
(11) (a) 40 c.c. (b) 35 c.c.
CASE LI. a

CHART a.

\[ \text{\textit{Gastric Analysis.}} \]

CHART b.

\[ \text{\textit{Gastric Analysis.}} \]
CASE LI A. Male - Aged 38.

HISTORY.

Patient had suffered from 'stomach trouble' at intervals for more than ten years.
He had two operations without gaining more than temporary relief.
He complained chiefly of pain, which commenced in the right iliac fossa, and travelled up to the epigastrium. This usually came on within half an hour of taking food, and lasted three or four hours. Sometimes he vomited and this relieved the pain.
He had no complaint of flatulence or heartburn, and between pains felt well.
Bowels tended to be constipated.

EXAMINATION.

Slight tenderness but no rigidity in both epigastric and caecal regions. No occult blood in the faeces.
X-ray examination revealed no abnormality.

OPERATION.

Adhesions. A few calcareous caecal glands.

DIAGNOSIS.

'Irritative Dyspepsia'. Adhesions in abdomen. Ileo-caecal glands.

FRACTIONAL ANALYSIS CHARTS.

(1) 3 days.
(2) (a) Easy (b) Easy.
(3) (a) High Normal (b) Normal
(4) Free Acidity =10.2. Total Acidity =9.2.
(5) (a) 2 hours or more (b) 2 hours or more.
(6) (a) trace (b) Nil.
(7) (a) Resting content (b) Resting content.
(8) (a) Resting content and irregular (b) Resting content, and end of test.
(10) (a) 135 c.c. (b) 40 c.c.
(11) (a) 45 c.c. (b) 55 c.c.
CASE LII.  Female - Aged 47.

HISTORY.

Six years ago patient had been operated on for a chronic gastric ulcer, and gastroenterostomy had been performed.

After a year her symptoms had returned, and she had continued to have attacks of pain in the epigastrium at frequent intervals, this was usually accompanied by vomiting, and suffered a great deal from heartburn.

A year ago a second operation had been performed, and the original gastroenterostomy opening had been stretched. This gave her relief for some months, but she was admitted to hospital suffering from epigastric pain, and vomiting of several week's duration.

EXAMINATION.

Slight tenderness, but no rigidity in the epigastrium. No occult blood in the faeces. Slight secondary anaemia.

RADIOLOGIST'S REPORT.

Showed the gastro-enterostomy opening to be patent, and that the stomach emptied rapidly.

DIAGNOSIS.

'Irritative Dyspepsia'. Chronic Gastric Ulcer.

FRACTIONAL ANALYSIS CHARTS.

(1) 1 day
(2) (a) Easy  (b) Easy
(3) (a) Normal  (b) Normal
(4) Free Acidity  Total Acidity = 9
(5) (a) 1½ hours  (b) 1¼ hours.
(8) Present throughout  (b) Present throughout.
(10) (a) 30  (b) 90 c.c.
(11) (a) Nil.  (b) Nil.
CASE LIII.

CHART a.

CHART b.

D. W. BROS., LTD., LONDON.

Gastric Analysis.
HISTORY.

Five years ago began to waste rapidly, this was associated with 'mucous colitis' which has recurred at intervals ever since. Up till two years ago patient complained of no other disturbance, but since then he has developed ataxia, and extreme weakness.

During the past two or three months he has been seized with sudden severe pains, in various parts of the body.

Appetite good, but afraid to eat 'as food either passes right through or remains choked up for days'.

EXAMINATION.

Presented characteristic symptoms of Locomotor Ataxia, absent knee jerks, small pupils etc. Wassermann reaction negative, and patient left hospital before a further test had been done.

DIAGNOSIS.

'Irritative Dyspepsia’. Locomotor Ataxia, gastric crisis.

FRACTIONAL ANALYSIS CHARTS.

(1) 1 day
(2) (a) Easy (b) Easy
(3) (a) Achlorhydria (b) Achlorhydria.
(4) Total Acidity = 6.7.
(5) (a) 1$\frac{3}{4}$ hours (b) 2 hours.
(6) (a) trace (b) trace.
(7) (a) Marked (b) Marked.
(8) (a) Resting content, and irregular (b) Resting content.
(10) (a) 35 c.c. (b) 30 c.c.
(11) (a) 25 c.c. (b) 35 c.c.
CASE LIV.

CHART a.

Gastric Analysis.

CHART b.

Gastric Analysis.
CASE LIV.

Male - Aged 52.

HISTORY.

Previous to six months ago had been a healthy man. He had then been seized with sudden abdominal pain in the epigastrium: a few hours later, after the pain had subsided partially, he vomited up a little red blood. For a week after this his whole abdomen was very tender, but he suffered no more severe pains, and had no further vomiting. Apart from weakness which he was gradually overcoming he had no gastric complaint when admitted to hospital. Bowels always regular.

EXAMINATION.

No abdominal rigidity or tenderness. No occult blood in faeces. X-ray examination showed no abnormality in a first bismuth series, but from a second series the radiologist reported appearances suggestive of duodenal ulcer.

DIAGNOSIS.

'Irritative Dyspepsia'. Possible duodenal ulcer.

FRACTIONAL ANALYSIS CHARTS.

(1) 1 day
(2a) Easy (b) Easy
(3a) Hyperchlorhydria (b) High Normal.
(4) Free Acidity =14 Total Acidity =16.
(5a) 2 hours or more (b) 2 hours or more.
(7a) present (b) Nil.
(10a) 98 (b) 10 c.c.
(11a) 35 (b) 35 c.c.
HISTORY.

Abdominal discomfort has been present for about twenty five years. Freedom from discomfort has occurred at short intervals, but there always seems to be a fullness in the stomach. Sometimes there is actual pain the site of which varies, and occasionally he has had 'burning sensations' in different parts of the abdomen.

In 1916 he was operated on, and a normal appendix removed. Since then his symptoms have been more severe, and have included vomiting in the early morning, almost consistently.

Bowels tend to be constipated.

EXAMINATION.

Physical examination unsatisfactory, as symptoms varied constantly.

No occult blood in faeces.

X-ray examination revealed no abnormality.

DIAGNOSIS.

'Irritative Dyspepsia'. Possibly due to abdominal adhesions.

FRACTIONAL ANALYSIS CHARTS.

(1) 1 day
(2) (a) Difficult, stilette used (b) Easy.
(3) (a) Normal (b) Normal.
(4) Free acidity = 3.8. Total Acidity = 6.4.
(5) (a) 2 hours or more (b) 1¼ hours.
(7) (a) present (b) Nil.
(8) Resting content, and end of test (b) Nil.
(10) (a) 42 c.c. (b) 35 c.c.
(11) (a) 35 c.c. (b) 40 c.c.
CASE LVII.

CHART a.

CHART b.
CASE LVII  

FEMALE - Aged 43.

HISTORY.

During the last five years had experienced three attacks of acute pain under the right costal margin, these attacks had lasted a few days only. They had been unaccompanied by vomiting, but there had been some nausea, and on one occasion she had been jaundiced slightly.

Between these attacks she suffered a great deal from flatulence, and often felt her stomach very distended. Her bowels tended to be constipated.

EXAMINATION.

Showed slight tenderness over the gall bladder no other abnormality could be found, X-Ray examination no organic disease.

DIAGNOSIS.

"Irritative Dyspepsia". Possibly due to cholecystitis.

FRACTIONAL ANALYSIS CHARTS.

(1) 2 days  
(2) (a) Easy  (b) Easy  
(3) (a) High Normal  (b) Normal  
(4) Free HCl-14.0  Total Acidity = 15.5  
(5) (a) 2 hours or more  (b) 2 hours or more  
(7) (a) Marked  (b) nil  
(8) (a) Resting Content & end of test  (b)  

(10) (a) 50  (b) 40 c.c.  
(11) (a) 20  (b) 25 c.c.
CASE LVIII

CHART a.

\[ \text{Acidity} \] \quad \text{Free HCl} \]

\[ \text{N/10 NaOH (\% HCl)} \]

1. \[ T_1: \text{ihr.} \]
2. \[ T_2: 2 \text{hr.} \]
3. \[ T_3: 3 \text{hr.} \]

CHART b.

\[ \text{Acidity} \] \quad \text{Free HCl} \]

\[ \text{N/10 NaOH (\% HCl)} \]

1. \[ T_1: \text{ihr.} \]
2. \[ T_2: 2 \text{hr.} \]
3. \[ T_3: 3 \text{hr.} \]
CASE LVIII.  FEMALE - Aged 38.

HISTORY.

For several years had suffered from vague abdominal pains. She would be free from trouble for months at a time, but her symptoms always returned. She complained of a great feeling of fullness particularly in the right iliac fossa. Occasionally she suffered from flatulence, and heartburn, and occasionally she had slight epigastric pain. On one occasion this pain had been accompanied by vomiting which lasted several days.

Her bowels were always constipated. Her appetite was poor, but she had remained well nourished.

EXAMINATION.

Some slight tenderness over the right iliac fossa, and a mobile right kidney were the only pathological findings. No occult blood was found in the faeces, and X-Ray examination showed no abnormality.

OPERATION.

Slight chronic inflammation of the appendix.

DIAGNOSIS.

"Irritative Dyspepsia". Chronic Appendicitis.

FRACTIONAL ANALYSIS CHARTS.

(1) 2 days
(2) (a) Easy (b) Easy
(3) (a) Normal (b) Normal.
(4) Free HCl-12.2 Total Acidity = 10.7.
(5) (a) 2 hours or more (b) 1 1/2 hours.
(8) (a) End of test (b) nil.
(9) (a) Flecks (b) nil.
(10) (a) 20 (b) 25 c.c.
(11) (a) 15 (b) 30 c.c.
CASE LIX.

CHART a.

CHART b.

DOWNS BROS., LTD., LONDON.
CASE LIX.  MALE Aged 19.

History.

For three years has suffered from a constant feeling of weight and discomfort in the abdomen. This is worst towards the end of the day as a rule, and interferes with his sleep.

There has never been any pain, and the uncomfortable sensation is referred to the epigastrium.

Occasionally he is troubled by flatulence, and sometimes heartburn.

Bowels always tend to be constipated.

EXAMINATION.

Revealed no area of tenderness or rigidity in the abdomen.

No occult blood was found in the faeces.

RADIOLOGIST'S REPORT.

Large, hypertonic stomach, very active, with marked pylorospasm.

DIAGNOSIS.

"Irritative Dyspepsia". Possibly duodenal ulcer.

FRACTIONAL ANALYSIS CHARTS.

(1) 1 day
(2) (a) Easy (b) Easy
(3) (a) High Normal (b) Hyperchlorhydria.
(4) Free HCl = 27.7  Total Acidity = 29
(5) (a) 2 hours or more (b) $1\frac{7}{8}$ hours.
(8) (a) Throughout (b) Throughout.
(10) (a) 25 c.c. (b) 65 c.c.
(11) (a) 54 c.c. (b) 45 c.c.
CASE LX.

CHART a.

CHART b.
CASE LX.  Female - Aged 58.

HISTORY.

Two attacks of acute pain below the right costal margin during the past year. Previous to this she had no symptoms except flatulence, and occasional 'biliary' turns.

During the past year the flatulence had been very much more marked, and she now complained of a constant feeling of fullness in the stomach. Vomiting had occurred during the acute pain, but not apart from it, and she had been slightly jaundiced occasionally. Bowels regular. Appetite fair.

EXAMINATION.

Showed definite tenderness in the epigastrium and some rigidity in the right rectus muscles. Bile was present in the urine.

OPERATION.

Gall bladder contained numerous stones.

DIAGNOSIS.

'Irritative Dyspepsia'. Chronic Cholecystitis.

FRACTIONAL ANALYSIS CHARTS.

(1) 1 day
(2) (a) Easy (b) Easy.
(3) Hyperchlorhydria (b) High Normal.
(4) Free Acidity = 15.2. Total Acidity = 17.7.
(5) (a) 2 hours or more (b) 2 hours or more.
(9) (a) stained (b) Nil.
(10) (a) 18 (b) 40.
(11) (a) 30 (b) 35 c.c.
CASE LXI.

CHART a.

CHART b.
CASE LXI.  
Female - Aged 42.

HISTORY.

Complained of discomfort in the abdomen for several years. She often felt sick, especially towards evening, but had never vomited. Occasionally there were slight pains, and a feeling of fullness over the right iliac fossa. Her symptoms varied considerably, and often she had been free from trouble for several months. Her bowels always tended to be constipated.

EXAMINATION.

There was definite tenderness on pressure in the epigastrium, and in the right iliac fossa where there was also some rigidity. No occult blood was found in the faeces. X-ray examination showed no abnormality.

OPERATION.

Appendix chronically inflamed.

DIAGNOSIS.

'Irritative Dyspepsia'. Chronic Appendicitis.

FRACTIONAL ANALYSIS CHARTS.

(1) 1 day
(2) (a) Difficult, stilette employed (b) Easy.
(3) (a) Achlorhydria (b) Achlorhydria.
(4) Total Acidity = 2.2.
(5) (a) 2 hours or more (b) 2 hours or more.
(7) (a) Marked throughout (b) Nil.
(8) (a) Nil (b) Resting content.
(10) (a) 150 (b) 50 c.c.
(11) (a) 60 (b) 35 c.c.
CASE LXII.

CHART a.

CHART b.
CASE LXII. Female - Aged 60.

HISTORY.

Patient had suffered from flatulence and 'indigestion' for many years. This had gradually become worse, and there was a constant feeling of weight in the stomach. Occasionally she suffered from nausea, but she had never vomited, nor had she had any severe pain. The appetite was poor, and she was very careful to avoid anything which 'might produce wind'. Recently she had developed a slight tinge of jaundice.

EXAMINATION.

There was some tenderness in the epigastrium, but apart from this no abnormality was found. X-ray examination showed a normal stomach.

OPERATION.

Chronic Cholecystitis with a little gall sand.

DIAGNOSIS.

'Irritative Dyspepsia'. Chronic Cholecystitis

FRACTIONAL ANALYSIS CHARTS.

(1) 1 day
(2) (a) Difficult (b) Difficult
(3) (a) Low Normal (b) Low Normal
(4) Free Acidity = 5.3. Total Acidity = 6.4.
(5) (a) 1½ hours (b) 1½ hours.
(8) (a) Resting content (b) Resting content and end of test.
(10) (a) 20 (b) 25 c.c.
(11) (a) Nil. (b) 15 c.c.
CASE LXIII.

CHART a.

CHART b.

Gastric Analysis.
CASE LXIII. MALE - Aged 54.

HISTORY.

For four or five years has been suffering from gastric pain. This pain is gnawing and severe and comes on at no definite time, in relation to food. Taking food or soda do not relieve the pain.

During the past year patient has had attacks of vomiting lasting several weeks at a time.

Flatulence and heartburn both very troublesome.

There has never been any blood seen in the vomit.

Bowels fairly regular.

EXAMINATION.

Definite tenderness in the mid line of the abdomen, and some rigidity. Size of stomach as judged by "splashing" always big. Occult blood found in faeces intermittently.

RADIOLOGIST'S REPORT.

Marked delay in emptying due to pyloric stenosis.

OPERATION.

Chronic Gastric Ulcer.

DIAGNOSIS.

"Mechanical Dyspepsia". Chronic Gastric Ulcer, affecting the pylorus.

FRACTIONAL ANALYSIS CHARTS.

(1) 1 day
(2) (a) Easy (b) Easy
(3) (a) High Normal (b) Normal
(4) Free HCl = 14.7 Total Acidity = 14
(5) (a) 2 hours or more (b) 2 hours or more
(6) (a) Marked (b) Marked
(8) (a) Resting Content & end of test (b) Nil
(9) (a) Flecks (b) nil
(10) (a) 60 c.c. (b) 15 c.c.
(11) (a) 60 c.c. (b) 110 c.c.
CASE LXIV.  MALE — Aged 72.

HISTORY.

Previous to four months ago patient had experienced no gastric disturbance. He then developed severe abdominal pain, which was almost constant, and not related to food. He was troubled greatly by flatulence, and vomited frequently, though this gave him no relief from pain.

His appetite became very poor, he lost weight rapidly, and his bowels became very constipated.

EXAMINATION.

The upper part of the abdomen was very rigid and tender. Underneath the rigidity a mass could be faintly outlined.

Occult blood present persistently in the faeces.

RADIOLOGIST'S REPORT.

Pylorus very irregular. Marked delay in emptying.

OPERATION.

Carcinoma of the body of the stomach.

DIAGNOSIS.

"Mechanical Dyspepsia". Carcinoma of the stomach.

FRACTIONAL ANALYSIS CHARTS.

<p>| | |</p>
<table>
<thead>
<tr>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>(1)</td>
<td>2 days</td>
</tr>
<tr>
<td>(2) (a)</td>
<td>Difficult (b) Easy</td>
</tr>
<tr>
<td>(3) (a)</td>
<td>High Normal (b) Hypochlorhydria</td>
</tr>
<tr>
<td>(4) Free HCl = 29.5</td>
<td>Total Acidity = 28</td>
</tr>
<tr>
<td>(5) (a)</td>
<td>2 hours or more (b) 2 hours or more</td>
</tr>
<tr>
<td>(6) (a)</td>
<td>Marked (b) Marked</td>
</tr>
<tr>
<td>(7) (a)</td>
<td>nil (b) Marked</td>
</tr>
<tr>
<td>(8) (a)</td>
<td>nil (b) at end of test</td>
</tr>
<tr>
<td>(9) (a)</td>
<td>nil (b) Flecks</td>
</tr>
<tr>
<td>(10) (a)</td>
<td>80 (b) 35 c.c</td>
</tr>
<tr>
<td>(11) (a)</td>
<td>95 (b) 20 c.c</td>
</tr>
</tbody>
</table>
CASE LXV.

CHART A.

CHART B.
CASE LXV. MALE - Aged 59.

HISTORY.

Two months ago had been in bed suffering from "phlebitis", and during this period he began to suffer from stomach trouble for the first time. Epigastric pain was slight and transient, but vomiting and flatulence were very marked.

This continued without remission for two months when the pain became more severe. It was unrelated to food, and was constant and gnawing.

Appetite was lost completely, and the patient emaciated rapidly.

EXAMINATION.

The upper part of the abdomen was held rigid, but there was no tenderness. As judged by "splashing" the stomach never seemed to empty.

Occult blood constantly in faeces.

RADIOLOGIST'S REPORT.

A large hypotonic stomach, marked delay in emptying. Pyloric shadow very irregular, suggesting malignancy.

DIAGNOSIS.

"Mechanical Dyspepsia". Possibly carcinoma of the stomach. (Death took place suddenly before operation had been performed).

FRACTIONAL ANALYSIS CHARTS.

(1) 2 days
(2) (a) Easy (b) Easy
(3) (a) High Normal (b) High Normal
(4) Free HCl = 8.5. Total Acidity = 10.5
(5) (a) 1 hour (b) 2 hours or more.
(6) (a) nil (b) Trace.
(8) (a) Throughout (b) Resting Content & end of test.
(9) (a) Flecks (b) Flecks
(10) (a) 45 c.c. (b) 90 c.c.
(11) (a) 30 c.c. (b) 70 c.c.
CASE LXVI.

CHART a. 5. VII. 1926.

CHART b.
CASE LXVI.  FEMALE - Aged 60.

HISTORY.

Prior to a year ago had experienced no stomach trouble. She then began to be troubled by flatulence, and a feeling of weight in the stomach.

Her appetite became poor, and she lost weight.

Since then her symptoms remained practically unchanged, except for two attacks of slight epigastric pain, and vomiting, each of which lasted about a fortnight. Occasionally she suffered from heartburn, but this has not been very marked.

Her bowels always tend to be constipated.

EXAMINATION.

No tenderness or rigidity to be found in the abdomen. There was some delay in emptying as judged by "splashing".

Occult blood constantly present in the faeces. X-Ray examination showed delay in emptying, and some irregularity of the pylorus.

OPERATION.

Carcinoma of the stomach.

DIAGNOSIS.

"Mechanical Dyspepsia". Carcinoma of the stomach.

FRACTIONAL ANALYSIS CHARTS.

(1) 1 day.
(2) (a) Easy (b) Easy.
(3) (a) Achlorhydria (b) Achlorhydria.
(4) Total Acidity = 3.
(5) (a) 2 hours or more (b) 2 hours or more.
(6) (a) Marked (b) Marked.
(7) (a) Very marked (b) Very marked.
(10) (a) 120 c.c. (b) 190 c.c.
(11) (a) 140 c.c. (b) 125 c.c.
CASE LXVII.

CHART a.

CHART b.
CASE LXVII.  MALE  -  Aged 53.

HISTORY.

For many years suffered from epigastric pain following food by a few hours. He used to gain some relief by taking food at frequent intervals. A year ago the pain began to get more severe, and occurred apart from meals.

He now vomits frequently, and suffers greatly from flatulence.

His appetite is good but he is afraid to take food, and he has lost a lot of weight.

His bowels have always been very constipated.

EXAMINATION.

Marked epigastric tenderness, and some rigidity of upper part of the right rectus muscle. Occult blood present constantly in faeces.

RADIOLOGIST'S REPORT.

Large hypertonic stomach, showing pylorospasm.

OPERATION.

Chronic Duodenal Ulcer.

DIAGNOSIS.

"Mechanical Dyspepsia". Chronic Duodenal Ulcer.

FRACTIONAL ANALYSIS CHARTS.

(1) 1 day  
(2) (a) Easy (b) Easy.  
(3) (a) Hyperchlorhydria (b) Hyperchlorhydria.  
(4) Free HCl = 9.5. Total Acidity = 7.7  
(5) (a) 2 hours or more (b) 2 hours or more.  
(6) (a) Marked (b) Marked  
(10) (a) 130 c.c. (b) 98 c.c.  
(11) (a) 90 c.c. (b) 140 c.c.
CASE LXVIII.

CHART a.

CHART b.
CASE LXVIII. MALE - Aged 59.

HISTORY.

Had been subject to epigastric pain for many years. This pain was usually worse towards evening, and interfered with his sleep. The pain had never been related to food in any way. Three months ago the pain began to get more severe, it lasted throughout the day, and was particularly bad after meals.

Recently he had been vomiting after every meal, and been troubled greatly by flatulence.

His bowels had always been very constipated.

EXAMINATION.

No tenderness or rigidity could be found in the abdomen. The stomach was always enlarged as judged by "splashing". No occult blood found in the faeces. X-Ray showed marked pyloric stenosis.

OPERATION.

Chronic Duodenal Ulcer.

DIAGNOSIS.

"Mechanical Dyspepsia". Chronic Duodenal Ulcer.

FRACTIONAL ANALYSIS CHARTS.

<table>
<thead>
<tr>
<th>Fraction</th>
<th>Description 1</th>
<th>Description 2</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>2 days</td>
<td></td>
</tr>
<tr>
<td>2</td>
<td>(a) Easy</td>
<td>(b) Easy</td>
</tr>
<tr>
<td>3</td>
<td>(a) High Normal</td>
<td>(b) High Normal</td>
</tr>
<tr>
<td>4</td>
<td>Free HCl = 20.0</td>
<td>Total Acidity</td>
</tr>
<tr>
<td>5</td>
<td>(a) 2 hours or more</td>
<td>(b) 2 hours or more</td>
</tr>
<tr>
<td>6</td>
<td>(a) Marked</td>
<td>(b) Marked</td>
</tr>
<tr>
<td>7</td>
<td>(a) nil</td>
<td>(b) Throughout</td>
</tr>
<tr>
<td>8</td>
<td>(a) 360 c.c.</td>
<td>(b) 40 c.c.</td>
</tr>
<tr>
<td>9</td>
<td>(a) 290 c.c.</td>
<td>(b) 90 c.c.</td>
</tr>
</tbody>
</table>
CASE LXIX.

CHART a.

CHART b.
CASE LXIX. MALE - Aged 62.

HISTORY.

For about twenty five years patient had found that worry, or any minor disturbance of health produced a vague feeling of discomfort in his stomach, this was not accompanied by pain, and lasted a few days only.

About a year ago he had been seized by a sudden attack of severe epigastric pain, which had lasted a few hours. Since then he had had a similar attack every few days.

He had begun to be troubled by flatulence, he had lost his appetite, and was losing weight rapidly.

EXAMINATION.

There was no tenderness in the epigastrium, but a distinct mass was palpable. Occult blood was present in the faeces.

RADIOLOGIST'S REPORT.

Large atonic stomach, showing delay in emptying. Pylorus irregular.

OPERATION.

Carcinoma of the stomach.

DIAGNOSIS.

"Mechanical Dyspepsia". Carcinoma of the stomach. Pyloric stenosis.

FRACTIONAL ANALYSIS CHARTS.

(1) 1 day
(2) (a) Easy (b) Easy.
(3) (a) Achlorhydria (b) Achlorhydria.
(4) Total Acidity = 3.2.
(5) (a) 1½ hours (b) 1½ hours.
(6) (a) Trace (b) Trace
(8) (a) At end of test (b) Resting Content end of test.
(10) (a) 30 c.c. (b) 90 c.c.
(11) (a) 45 c.c. (b) 20 c.c.
CASE LXIX A.  

MALE - Aged 35.

HISTORY.

Prior to the war, patient had suffered from mild "indigestion", but during the war this had appeared to clear up entirely. Three years ago his symptoms had returned with greater severity.

He had pain in the epigastrium about two hours after every meal. This continued till the next meal when it was relieved partially. He had never vomited but frequently felt nausea, and was troubled by water-brash.

His appetite had remained good, but he was afraid to take food.

EXAMINATION.

Slight tenderness in the epigastrium but no rigidity. Occult blood constantly in faeces.

RADIOLOGIST'S REPORT.

Large hypertonic stomach, with delay in emptying. Suggested gastric ulcer.

DIAGNOSIS.

"Mechanical Dyspepsia". Probably Gastric Ulcer (operation refused).

FRACTIONAL ANALYSIS CHARTS.

(1) 1 day
(2) (a) Difficult, stilette employed. (b) Easy
(3) (a) Normal (b) High Normal.
(4) Free HCl = 15.6 Total Acidity.
(5) (a) 1½ hours or more (b) 2 hours or more.
(6) (a) Marked (b) Marked.
(8) (a) nil (b) Resting Content.
(9) (a) Stained (b) Stained.
(10) (a) 240 c.c. (b) 78 c.c.
(11) (a) Vomited (b) 65 c.c.
CASE LXX.

CHART a. 18 XII - 25.

CHART b. 22 XII - 25.

Gastric Analysis.

acidity

free HCl.

Gastric Analysis.

acidity

free HCl.
CASE LXX.  FEMALE - Aged

HISTORY.

Patient had suffered from "indigestion" for thirty years. During the last six months this had become much worse. She began to have epigastric pain after every meal, and only gained relief by vomiting. She felt very distended constantly, and was troubled greatly by flatulence.

She had lost her appetite, and had become very thin and weak.

Her bowels were very constipated.

EXAMINATION.

Showed slight tenderness in the epigastrium, but no other pathological lesion could be found.

Occult blood was present constantly in the faeces.

RADIOLOGIST’S REPORT.

A large atonic stomach with great delay in emptying.

OPERATION.

Carcinoma of the stomach.

DIAGNOSIS.

"Mechanical Dyspepsia". Carcinoma of the stomach with pyloric stenosis.

FRACTIONAL ANALYSIS CHARTS.

(1) 4 days.
(2) (a) Easy (b) Easy.
(3) (a) Achlorhydria (b) Achlorhydria.
(4) Total Acidity = 7.7
(5) (a) 2 hours or more (b) 2 hours or more.
(6) (a) Marked (b) Marked.
(7) (a) Marked (b) Marked.
(9) (a) Stained throughout (b) Stained throughout.
(10) (a) 60 c.c. (b) 50 c.c.
(11) (a) 50 c.c. (b) 20 c.c.
CASE LXI.

CHART a.

CHART b.
CASE LXXI. MALE - Aged 42.

HISTORY.

About a year ago patient began to be troubled by retching and vomiting, which came on after breakfast. During the rest of the day he felt fairly well except for some slight epigastric discomfort. Two months ago his symptoms became worse, and he vomited after every meal. He lost his appetite, and lost weight very rapidly. He was greatly troubled by flatulence, but apart from this had little discomfort between the attacks of vomiting.

EXAMINATION.

Showed some slight tenderness in the epigastrium. A vague tumour could be felt indefinitely. Occult blood was present constantly in the faeces.

X-ray examination showed great delay in emptying.

OPERATION.

Carcinoma of the Stomach.

DIAGNOSIS.

"Mechanical Dyspepsia". Carcinoma of the stomach with pyloric stenosis.

FRACTIONAL ANALYSIS CHARTS.

(1) 1 day
(2) (a) Easy (b) Easy.
(3) (a) Hypochlorhydria (b) Hypochlorhydria.
(4) Free HCl = 2.6 Total Acidity = 4.
(5) (a) 2 hours or more (b) 2 hours or more.
(6) (a) Marked (b) Marked.
(10) (a) 270 c.c. (b) 410 c.c.
(11) (a) 320 c.c. (b) 260 c.c.
CASE LXXIII.

CHART a.

CHART b.

Gastric Analysis,
CASE LXXIII. FEMALE - Aged 50.

HISTORY.

About twenty years ago patient suffered from "indigestion" for several years. This disappeared completely, and she had no further trouble until a year ago. She then began to suffer from pain in the epigastrium, which came on shortly after food, and persisted till the next meal. Occasionally she vomited and this gave her relief. She suffered a great deal from heartburn, but was not troubled by flatulence.

Appetite good, but she was afraid to eat. Bowels rather constipated.

EXAMINATION.

Showed definite tenderness and rigidity in the epigastrium. No occult blood in the faeces.

RADIOLOGIST'S REPORT.

Large hypertonic stomach, with marked delay in emptying.

OPERATION.

Chronic Gastric Ulcer.

DIAGNOSIS.

"Mechanical Dyspepsia". Chronic Gastric Ulcer.

FRACTIONAL ANALYSIS CHARTS.

(1) 2 days.
(2) (a) Easy (b) Easy.
(3) (a) Hyperchlorhydria (b) Low Normal.
(4) Free HCl = 28.5 Total Acidity = 31.5
(5) (a) 2 hours or more. (b) 2 hours or more.
(6) (a) Marked (b) Marked.
(7) (a) nil (b) Resting, and slightly throughout.
(10) (a) 40 c.c. (b) 60 c.c.
(11) (a) 95 c.c. (b) 30 c.c.
CASE LXXV.  FEMALE — Aged 42.

HISTORY.

Patient had suffered greatly from "indigestion" for many years. But eighteen months ago, she had been operated on and a partial gastrectomy, with gastro-duodenostomy, had been performed.

Since then she had been quite well as regards her indigestion, but she always felt very weak since the operation, very easily tired, and on several occasions she had fainted.

Her appetite was good but she felt "very full", if she took a meal of a normal size, and she was accustomed to take several small meals at frequent intervals.

EXAMINATION.

Failed to reveal any evidence of gastrointestinal disturbance.

No occult blood found in faeces.

X-ray examination showed the enterostomy opening to be working well.

DIAGNOSIS.

A slight degree of Arterio sclerosis.
Stomach acting physiologically despite operation.

FRACTIONAL ANALYSIS CHARTS.

(1) 1 day.
(2) (a) Easy  (b) Easy.
(3) (a) Hypochlorhydria  (b) Low Normal.
(4) Free HCl = 13.6 Total Acidity = 9.7
(5) (a) 1½ hours  (b) 1½ hours.
(8) (a) Throughout  (b) Throughout.
(10) (a) 35  (b) 10 c.c.
(11) (a) 12  (b) nil.
CASE LXXIX. a.

CHART a.

CHART B.