right pleural cavity on 2.12.37. This had the desired effect and the effusion diminished in amount. Rib resection was performed at a later date. The left-sided effusion completely subsided with aspiration.

10.3.38 : The child was transferred to Queen Mary's Hospital, Carshalton, for a period of convalescence. When seen recently his general condition was excellent. X-rays show normal heart shadow.

Dwarfism Resulting from Chronic Regional Enteritis. — NORMAN C. TANNER, F.R.C.S. (by permission of Sir FREDERICK MENZIES).

S. R., male, Jewish, aged 18½ years, admitted to Highgate (L.C.C.) Hospital March 4, 1938.

History.—Good health and normal physical development until 1933, when he began to have attacks of abdominal pain, and was constantly fatigued.

January 1935 : Admitted to hospital. A mass was found in the right iliac fossa.

Operation (February 1935).—Laparotomy. Report on portion of mass removed : "Fibrous chronic pyogenic granulation tissue in adipose tissue. No evidence of neoplasm." The wound healed, but the listlessness continued, the pain became "unbearable" and the patient lost weight and his abdomen became distended.

April 1936 : Readmitted same hospital. Abscess in right iliac fossa incised ; watery fæces began to discharge from the wound. Afterwards defæcation gradually ceased, until there was only a monthly evacuation of a little white material. Unavailing attempts were made to close the fistula by "plugging". In December 1936 patient was sent, with a diagnosis of peritoneal tuberculosis, to St. Luke's Hospital, Lowestoft, where he remained, with multiple fistulæ discharging fæces, until March 1938, when he was transferred to Highgate Hospital.

Condition on admission.—Appearance resembled that of a boy aged 14 or 15. Height 4 ft. 7 in. ; weight 4 st. 11 lb. No beard ; says that his two elder brothers did not shave until after the age of 19. Pubic hair scanty, but considerable local dermatitis due to the fæcal discharge. Genitalia apparently normal. Voice rather high in pitch. Intelligence and mental outlook normal.

Abdominal examination : Right paramedian scar with two fistulæ in its length ; scars of three other fistulæ, and dense "wooden" induration in right iliac fossa. On rectal examination, some induration was felt high up anteriorly.

Family history.—Three brothers, aged 11, 22, and 28, and one sister, aged 24, all of normal height.

Investigations.—Blood : R.B.C. 5,050,000 per c.mm. ; Hb. 76% ; W.B.C. 20,500 (polys. 85% ; lymphos. 12% ; monos. 3%). Sedimentation rate 26 mm. in one hour. Wassermann and Kahn reactions both negative.

Serum : No agglutination with *B. typhosus*, *B. paratyphosus* B, *B. aertrycke*, *B. enteritidis* Gaertner, *B. dysenteriæ* Sonne, or *B. abortus*.

Fæces from fistulæ : Numerous pus cells present. No tubercle bacilli seen. No pathogenic coliform bacilli isolated.

X-ray examination (Dr. Francis Rayner) : (1) Barium meal : Marked dilatation of coils of terminal ileum, beyond which the intestine shows an irregular contour, with alternating lengths of dilatation and contraction ; beyond this again the meal is seen to pass through a fistulous track to the skin, none entering the cæcum. (2) Barium enema : The colon fills normally. A few centimetres of ileum are outlined and then end in a fine narrow track. (3) After injection of barium emulsion into the sinus : This shows a constant deformity of a coil of distal ileum, corresponding in form and shape with that seen after the opaque meal. Some of the emulsion enters the ileum adjacent to the ileocæcal valve by way of another fistulous track. Again one segment of ileum fails to show an outline. (4) Elbow joints : Slight general osteoporosis ; the lower humeral, the upper radial, and ulnar epiphyses are not yet united with the shaft. (5) Skull : normal outline of pituitary fossa.

Operation (April 4, 1938).—Left paramedian incision. Small bowel examined from duodeno-jejunal flexure ; found normal as far as lower ileum, which disappeared into a dense adherent mass in the right iliac fossa. Lower ileum divided ; proximal end united to transverse colon, end-to-side, and distal end closed.

Following this, the induration in the fossa greatly diminished, and the slight distension disappeared. Discharge was fæcal for short time after the operation, then purulent ; six weeks later about 5 oz. clear fluid were discharged every twenty-four hours.

Operation (May 23, 1938).—Right abdominal incision through undifferentiated fibrous tissue—normal planes of abdominal wall being unrecognizable. Dense adhesions between ileum and anterior abdominal wall were separated. Adhesions were also found between loops of ileum and between ileum and cæcum. Bowel resected, from the site of previous division of the ileum, to the junction of the right and middle thirds of the transverse colon. Wound was closed with drainage and a blood transfusion was given.

Since then improvement has been marked. The wound has healed completely. Subsequent height and weight measurements :—

		Ft.	in.	St.	lb.
	25.6.38	4	7⅝	4	11¾
	31.8.38	4	8½	6	6
	17.11.38	4	9⅜	6	2
(Postscript)	25. 1.39	4	10⅛		

Patient is now working and feels well. Has a bowel action twice or thrice daily ; stools usually well formed, occasionally loose. Is encouraged not to restrict his diet.

Pathological report (Dr. W. G. Barnard) : The specimen includes the terminal 2 ft. of ileum, cæcum and 10 in. of ascending colon. The peritoneal surface of the ileum is indurated and fibrous with numerous areas of hæmorrhage and fibrous tags. The wall of the ileum is greatly thickened and hypertrophied, in places producing stenosis of the lumen, the terminal 6 in. of which is completely obliterated.

Histological examination : Active chronic inflammation of ileum with hypertrophy of muscularis and focal membranous inflammation of mucosa (Crohn's disease).

Summary.—This is a case of chronic regional enteritis, which has caused marked physical underdevelopment, probably as a result of intestinal malabsorption.

I am in some doubt as to whether the case should be considered as one of dwarfism or infantilism. There is possibly some gonadal underdevelopment, and the secondary sexual characters have not yet completely appeared.

Of interest in this case is the complete obliteration of the lumen of the terminal six inches of diseased bowel, a complication I have not seen described in regional enteritis.

Two cases of retarded growth in patients both aged 16, suffering from chronic regional enteritis have been recorded, the one by Professor I. Snapper, J. Groen and A. Foyer, and the other by A. H. Logan and R. W. Brown. The nutrition of both of these cases was markedly improved after short-circuiting operations.

BIBLIOGRAPHY

Snapper, I., Groen, J., and Foyer, A. Observations sur l'ileite régionale. *Proceedings of Second International Congress of Gastro-enterology*, Brussels, 1937, p. 935.

Logan, A. H., and Brown, R. W., *Proceedings of the Staff Meetings of the Mayo Clinic*, 1938, **13**, p. 335:

Unilateral Exophthalmos for Diagnosis.—C. A. Clarke, M.D., and J. G. Jamieson Coghill, M.B.

G. G. L., male, aged 29. Solicitor.

Family history.—Nothing relevant.

Previous illnesses.—Occasional twinges of rheumatism in shoulders. Varicose vein, injected 1935.