### Parkland Memorial Hospital MEDICAL GRAND ROUNDS August 24, 1961

### ULCERATIVE COLITIS

This 66-year-old CASE 1 male was admitted , 1900, with a three-week history of frequent (20/day), foul-smelling, blood-streaked, mucoid stools associated with rectal pain and recurrent cramping pain localized to the left lower abdominal quadrant. He had fever and chills and began to vomit repeatedly two days prior to admission. There had been at least three similar such episodes in the past 25 years separated by completely symptom-free intervals. He did not recall arthritis, skin lesions, adenopathy or other significant changes. and denied a family history. Examination showed a chronically ill, pyrexial, dehydrated, hypotensive man with marked LLQ. tenderness. Radiological exam revealed a shortened, narrow, pipe-like descending colon with an absence of haustrations. He was treated with I.V. fluids, codeine, Thorazine, paregoric and chloromycetin for 8 days with a poor response. Prednisolone and Terramycin were added without marked benefit, and, as the patient had now developed signs and symptoms of possible intestinal obstruction. surgery was decided upon. Laparotomy revealed a severe, diffuse ulcerative colitis with multiple gangrenous areas and a perforation of the transverse colon. A total colectomy and ileostomy were performed, and, also, a cholecystotomy for a distended gallbladder. The patient had an extremely stormy post-operative course with a complete abdominal wound disruption, parotitis, otitis, thrombophlebitis, biliary fistula and respiratory difficulties with death on the 25th post-operative day.

Histological examination revealed the classic changes of acute on chronic ulcerative colitis involving the ileum, colon, and rectum. The mucosal, submucosal and muscular layers were ulcerated and infiltrated with acute and chronic inflammatory cells.

case 2 ( . This 23-year-old female was admitted . 1960, with a 4½-year history of increasing diarrhea (up to 20 watery, blood-streaked stools/day) associated with fever, lower abdominal and rectal pain, malaise, tiredness and weight loss. During 1958 she had a short period of medical treatment including steroids which resulted in marked improvement for about 4 months. On admission to . she was in good general condition with a Hb. of 12.9 gm.%, normal electrolytes and serum proteins. Radiological exam revealed a shortened colon with multiple pseudopolyps. She was intensively treated for 2 weeks with

hydrocortisone enemas, sulfathalidine, neomycin, antispasmodics and sedatives without a decrease in the number of bowel movements. At operation, the terminal ileum, ascending and transverse descending and upper portion of the sigmoid colon were resected and an ileostomy constructed. The post-operative course was uneventful, and, on discharge, bowel movements were normal and the patient was symptom-free and gaining weight steadily.

Examination of the resected specimen showed innumerable, very large mesenteric lymph nodes and many sessile pseudopolyps. Histological examination showed diffuse ulceration of the mucosal and submucosal layers with chronic inflammatory cell infiltration throughout the wall of the colon. There was R.E. hyperplasia of the submucosal lymphoid tissue and the lymph nodes.

CASE 3 ( This 37-yearfemale was first hospitalized in , 1950, with a one-year history of diarrhea and weight loss. Procotoscopic and radiological examination confirmed the diagnosis of ulcerative colitis and steroid therapy was commenced. A subacute arthritis involving the knees, one hip, and the wrists occurred in 1951, coincident with a mild relapse of the colitis. Since that time, she has been maintained on medical treatment and has had a number of mild relapses - the last in , 1959, which was accompanied by a recurrence of the arthritis in the knee, wrist, and M.C.P. joints. X-rays of the joints were normal; the total serum proteins 8.6 gm.%, with a globulin of 4.0 gm.%; antinuclear fluorescence test strongly positive. She is at present well-controlled on prednisolone, "azulfidine" (salicylazosulfapyridine) and sedatives.

# COLON ANTIBODIES IN ULCERATIVE COLLITIS

AUTHOR	TEST	ANTIGEN	NO	no. tested	NO. POSITIV.	5
BROBERGER	Precipitin (double	Thenol-Water Ext.	30	30 children	22	
\$00 500	diffusion in agar) Haemagglutination	whole normal colon	8	5	00	
,	(sheep enythrocytes					
	coated with ext. colon)				,	
ASHERSON	2		7		CU proj	
948 ·			36	adults	8	
POLCAR	Agglutination	Homogenate normal colon	30	dan din	30	,
	(collodion particles	micosa and submicosa				
	coated with colon)					
BREGMAN	Haemagglutination	Saline extract normal	9	2	77	×
	(sheep erythrocytes	colon mucosa				
	coated with colon)					
MARATER	Agglutination	Saline extract whole	44	gre-	22	i Tage
	(collodion particles)	normal and U.C. colon				

# BIBLIOGRAPHY SCHEWE

			* * * * * * * * * * * * * * * * * * *	Page
5-0	His	storical		5
II.	Pat	chology		5
III.	Cli	nical		6
IV.	Son	e Associated Complication	tions:	7
	A.	Skin lesions		7
	B.	Hepatic involvement		7
	C.	Arthritis		8
	D.	Carcinoma	/-	8
V.	The	rapy		8
VI.	Et1	ology		9

### REFERENCES

### I. HISTORICAL

- 1. Sydenham, Thomas. On acute and chronic diseases, Vol. I. Published by G.G.J. and J. Robinson, London, 1688.
- 2. Wilks, S. and Moxan, W. Lectures on pathologic anatomy. 2nd Edition, p. 672. London, Churchill, 1875.
- 3. White, W. H. On simple ulcerative colitis and other intestinal ulcers. Guy's Hosp. Rep. 45:131, 1888.

# II. PATHOLOGY

- 4. Dukes, C. D. Surgical pathology of ulcerative colitis. Ann. Roy. Coll. Surgeons 14:389, 1954.
- 5. Lumb, G. and Protheroe, R.H.B. The early lesions of ulcerative colitis. Gastroenterology 33:457, 1957.
- 6. Lumb, G. and Protherce, R.H.B. Ulcerative colitis, a pathologic study of 152 surgical specimens. Gastro-enterology 34:381, 1958.
- 7. Gallart-Mones, F. Pathological anatomy of severe ulcerative colitis. Gastroenterology 86:632, 1956.
- 8. Bockus, H. L., et al. Life history of nonspecific ulcerative colitis: Relation of prognosis to anatomical and clinical varieties. Gastroenterology 86:549, 1956.
- 9. Goldgraber, M. B., Kirsner, J. B. and Palmer, W. L. The histopathology of chronic ulcerative colitis and its pathogenic implications. Gastroenterology, Vol. II, 953, 1958.
- 10. Lamb, G. and Protheroe, R.H.G. Biopsy of the rectum in ulcerative colitis. Lancet 2:1208, 1955.
- 11. Truelove, S. C. and Richards, W. C. Biopsy studies in ulcerative colitis. Brit. Med. J. 1:1315, 1956.
- 12. Dick, A. P. and Grayson, M. J. Ulcerative colitis, a follow-up investigation with mucosal biopsy studies. Brit. Med. J. 1:160, 1961.

### III. CLINICAL

- 13. Bacon, H. E. Ulcerative colitis. Philadelphia, Lippincott, 1958.
- 14. Brooke, B. N. Ulcerative colitis, Edinburgh, Living-stone, 1954.
- 15. Grace, W. J., Wolf, S. and Wolff, H.G. The Human Colon. New York, Hoeber, 1951.
- 16. Sloan, W. P., Bargen, J. A. and Gage, R. P. Life histories of patients with chronic ulcerative colitis: A review of 2,000 cases. Gastroenterology 16:25, 1950.
- 17. Banks, B. M., Korelitz, B. I. and Zetzel, L. The course of non-specific ulcerative colitis: Review of twenty-years' experience and late results. Gastro-enterology 32:983, 1957.
- 18. Wheelock, F. C. and Warren, R. Ulcerative colitis: Follow-up studies. New Eng. J. Med. 252:421, 1955.
- 19. Linder, A. E., King, R. C., and Bolt, R. J. Chronic ulcerative colitis. Gastroenterology 39:153, 1960.
- 20. Bercovitz, Z. T. Ulcerative colitis in older-age patients. Gastroenterology 39:28, 1960.
- 21. Yarmis, H. and Crohn, B. B. Segmental (ulcerative) colitis. Gastroenterology 38:721, 1960.
- 22. Kiefer, E. D. and Gialanella, R. R. Arrested chronic ulcerative colitis. Gastroenterology 39:687, 1960.
- 23. Kirsner, J. B., Palmer, L. L. and Klotz, A. P. Reversibility in ulcerative colitis. Radiology 57:1, 1951.
- 24. Hughes, E. S. R. Acute ulcerative colitis. Dis. Colon and Rectum 4:3, 1961.
- 25. Brooke, B. N. Granulomatous diseases of the intestine. Lancet 2:745, 1959. Includes a discussion on liver damage and surgery.
- 26. Rankin, J.G., Goulston, S. J. M., Boden, R. W. and Morron, A. W. Fulminant ulcerative colitis. Quart. J. Med. 29:375, 1959.

- 27. Platt, J. W., Schlesinger, B. E. and Benson, P. F. Ulcerative colitis in childhood. Quart. J. Med. 29:257, 1960.
- 28. Cornes, J. S. and Stecher, M. Diagnosis of Crohn's disease and ulcerative colitis. Brit. Med. J. 1:1391, 1961.
- 29. Kleckner, M. S., Stauffer, M. H., Bargen, J. A. and Dockerty, M. Complications of ulcerative colitis. Gastroenterology 22:13, 1952.
- 30. Watkinson, G., Thompson, H. and Goligher, J. C. Right-sided or segmental ulcerative colitis. Brit. J. Surg. 47:337, 1960.

  An excellent article which clearly specifies the type of patient to whom ileorectal anastomosis might be offered.

### IV. SOME ASSOCIATED COMPLICATIONS

### A. Skin Lesions

- 31. Goldgraber, M. B. and Kirsner, J. B. Gangrenous skin lesions associated with chronic ulcerative colitis. Gastroenterology 39:94, 1960.
  Contains good list of references.
- 32. Foster, J. J. and Brick, J. B. Erythema nodosum in ulcerative colitis. Gastroenterology 27:417, 1954.

# B. Hepatic Involvement

- 33. Boden, R. W., Rankin, J. G., Goulston, J. M. and Morrow, W. The liver in ulcerative colitis. Lancet 2:245, 1959.
- 34. Monto, A. S. The liver in ulcerative disease of the intestinal tract. Ann. Int. Med. 50:1385, 1959.
- 35. Brooke, B. N. A study of liver disorder in ulcerative colitis. Postgrad. Med. J. 37:245, 1961.
- 36. Willocx, R. G. and Isselbacher, K. J. Chronic liver disease in young people. Am. J. Med. 30:185, 1961. Seven of 33 patients had ulcerative collitis.
- 37. Gray, N., MacKay, I. R. and others. Hepatitis, colitis and lupus manifestations. Am. J. Digest. Dis. 3:481, 1958.

38. Steinfeld, J. L., Davidson, J. D., Gordon, R. S. and Greene, F. E. The mechanism of hypoproteinemia in patients with regional enteritis and ulcerative colitis. Am. J. Med. 29:405, 1960. Their findings suggest that the low body albumin store is due to loss of protein into the intestinal tract with subsequent digestion and/or excretion.

# C. Arthritis

- 39. Bywaters, E. G. L. and Ansell, B. M. Arthritis associated with ulcerative colitis. Ann. Rheum. Dis. 17:169, 1958.
- 40. Wright, V. and Watkinson, G. The arthritis of ulcerative colitis. Medicine 38:243, 1959.
- 41. McEwen, C., Ziff, W., Carmel, P. Ditata, D. and Tanner, W. The relationship to rheumatoid arthritis of its so-called variants. Arth. and Theum. 1:481, 1958.
- 42. Fernandez-Herlihy, L. New Eng. J. Med. 261:259, 1959.
- 43. Ford, D. E. and Vallis, D. G. The clinical course of arthritis associated with ulcerative colitis and regional ileitis. Arth. and Rheum, 2:526, 1959.
- 44. Zvaifler, N. J. and Martel, W. Spondylitis in chronic ulcerative colitis. Arth. and Rheum. 3:76, 1960.
- 45. Steinberg, V. L. and Storey, G. Ankylosing spondylitis and chronic inflammatory lesions of the intestines. Brit. Med. J., Nov. 16, 1157, 1957.

# D. Carcinoma

- 46. Goldgraber, M. B., Kirsner, J. B., Palmer, W. L. and co-workers. Carcinoma and ulcerative colitis. Parts 1, 2, 3, and 4. Published in Gastroenterology, Vol. 34, 1958.
- 47. Slaney, G. and Brooke, B. W. Cancer in ulcerative colitis. Lancet 2:694, 1959.
- 48. Bargen, J. A. and Gage, R. P. Carcinoma and ulcerative colitis: Prognosis. Gastroenterology 39:385, 1960.

# V. THERAPY

Therapy is discussed in many of the articles listed in the clinical section. The following are more comprehensive if not always more critical reviews.

- 49. Kirsner, J. B. Current concepts of the medical management of ulcerative colitis. J.A.M.A. 169:433, 1959.
- 50. Kirsner, J. B. and co-workers. ACTH and adrenal steroids in the management of ulcerative colitis. Ann. Int. Med. 50:891, 1959.
- 51. Truelove, S. C. and Witts, L. J. Cortisone in ulcerative colitis. Brit. Med. J. 2:1041, 1955.

  A double-blind study.
- corticotrophism in ulcerative colitis. Brit. Med. J. 1:387, 1959.

  A comparison between cortisone and ACTH and also a double-blind of cortisone as a maintenance therapy.
- 53. Maltby, E. J., Dickson, R. C. and O'Sullivan, P. M. Canad. Med. Ass. J. 74:4, 1956.
- 54. Watkinson, G. Medical management of ulcerative colitis. Brit. Med. J. 1:147, 1961.
- 55. Goligher, J. C. Surgical treatment of ulcerative colitis. Brit. Med. J. 1:151, 1961.
- 56. Aylett, S. O. Brit. Med. J. 2:1348, 1953. Enthusiastic for anastomotic operations.
- 57. Manning, J. H., Warren, R. and Adi, A. S. New Eng. J. Med. 252:850, 1955.
  Less enthusiastic for anastomotic operations.
- 58. Truelove, S. C. Local steroid treatment in severe attacks of ulcerative colltis. Brit. Med. J. 2:102, 1960.

# VI. ETIOLOGY

An excellent symposium on current concepts appears in

59. Gastroenterology 40:386-369, Feb., 1961. It includes discussion of the psychological, physiological, bacteriological, immunological and chemical aspects of the disease.

## A. Experimental

- 60. Kirsner, J. B. and co-workers. Production of an experimental ulcerative "colitis" in rabbits. Arch. Path. 68:392, 1959.
- 61. Kirsner, J. B. and Goldgraber, M. B. Hypersensitivity, autolemunity and the digestive tract. Gastroenterology 38:536, 1960.
  An excellent review contains 320 references.
- 62. Florey, H. W. The structure of normal and inflamed small blood vessels of the mouse and rat colon. Quart. J. Exp. Physiol. 46:119, 1961.
- 63. Folcak, J. and Vokurka, V. Auto-immune reactions in the course of ulcerative colitis. Am. J. Digest. Dis. 5:395, 1960.
- 64. Maratka, Z. and Wagner, V. Anticolon auto-antibodies in ulcerative colitis and various digestive disorders. Rev. Franc. Etudes Clin. Biol. 6:182, 1961.
- 65. Eroberger, O. and Perlmann, P. Autoantibodies in human ulcerative colitis. J. Exp. Med. 110:657, 1959.
- 66. Autoantibodies against antigen derived from colon in the microsomes of regional colonic lymph glands in human ulcerative colitis. Nature 188:749, 1960.
- 67. Bregman, E. and Kirsner, J. B. Colon antibodies. Fed. Proc. 20 (1), Part 1:13, 1961. (Abstracts).
- 68. Asherson, G. L. and Broberger, O. Incidence of hacmagglutinating and complement-fixing antibodies. Brit. Med. J. 1:1429, 1961.

# Bloodegroups and searctor status in ulcerative colitis:

- 69. Winstone, N. E., Henderson, A. J., and Brooke, B. N. Lancet 2:64, 1960 ---- and
- 70. Smith, R. S. and Truelove, S. C. Brit. Med. J. 1:870, 196.
  There is no relationship.
- 71. Truelove, S. C. Ulcerative colitis provoked by milk. Brit. Med. J. 1:154, 1961.