# DISEASES OF THE RECTUM, ANUS AND SIGMOID COLON

BY

## F. SWINFORD EDWARDS, F.R.C.S.

SENIOR SURGEON TO ST. MARK'S HOSPITAL FOR FISTULA AND OTHER DISEASES OF THE RECTUM, SURGEON TO THE WEST LONDON HOSPITAL, AND SENIOR SURGEON TO ST. PETER'S HOSPITAL FOR URINARY DISEASES

BEING THE THIRD EDITION OF COOPER AND EDWARDS' DISEASES OF THE RECTUM AND ANUS



ILLUSTRATED AND ENLARGED

### LONDON

## J. & A. CHURCHILL

7 GREAT MARLBOROUGH STREET

1908

## PREFACE TO THE THIRD EDITION

The last edition of this book was published sixteen years ago. Since that time a great advance has been made both in the diagnosis and in the treatment of the diseases affecting the lower part of the large intestine.

So many improvements have been introduced into the practice of this branch of surgery that I have found it necessary not only to revise the whole book, but also to rewrite many chapters and to add others on the use of the Sigmoidoscope and the operative treatment of Malignant Disease of the Rectum and Sigmoid Colon.

The title of the book has been extended, as modern methods of diagnosis have rendered the treatment of diseases of the Sigmoid Colon inseparable from those of the upper Rectum.

To the chapter on Fistula I have added several cases and diagrams illustrating its various forms and their treatment, with special reference to horseshoe and semi-horseshoe fistulæ—the conformation of which has not yet received proper recognition.

The reader will find much new material in the chapter on Procidentia Recti, with a description of Sigmoidopexy and other modern methods of treatment.

In rewriting the chapter on Colotomy, the description of the old lumbar operation has been omitted; whilst a full description of Iliac Colotomy, as performed by the author, has been added. This chapter also includes Hypogastric Colotomy and the methods to be employed for the closure of an artificial Anus.

The operation of Appendicostomy for the treatment of severe forms of Ulcerative Colitis, also a method for the restoration of a damaged sphincter, have been described.

Several references will be found to my friend Professor Tuttle's important work on "Diseases of the Anus, Rectum and Pelvic Colon," more especially in regard to dysenteric Proctitis.

A large number of original drawings and figures have been added, and all the old photo-prints have been omitted.

For these drawings I am much indebted to Mr. Sewell, who has carried out my ideas with much ability. Many of these drawings were made from photographs taken by Mr. Aslett Baldwin and others from rough sketches by myself.

Mr. Stephen Paget has been good enough to give me much help with the proofs, and I am indebted to him for many valuable suggestions.

Whilst this edition was passing through the press I have had to lament the loss of my old and good friend, Sir Alfred Cooper, with whom I edited the former edition.

In offering this book to my professional brethren I would like them to accept it as a record of my own experience, gained during thirty years of work, both in general surgery and in this special subject.

F. SWINFORD EDWARDS.

55 HARLEY STREET, W. June 1908.

# CONTENTS

I. Introduction and Statistics	PAGE
II. GENERAL SYMPTOMS OF DISEASES OF THE RECTUM,	
AND METHODS OF EXAMINING THE BOWEL	6
III. THE ANATOMY AND FUNCTIONS OF THE RECTUM AND	
THE SIGMOID FLEXURE.	24
IV. THE SIGMOIDOSCOPE	46
V. Congenital Malformations of the Anus and	
Rectum	63
VI. Hæmorrhoids	64
VII. FISTULA-IN-ANO	138
VIII. FISTULA IN PHTHISICAL SUBJECTS — THE ELASTIC	
LIGATURE AND OTHER METHODS OF TREATING	
FISTULA—IMPAIRED POWER OF SPHINCTER ANI .	177
IX. COMPLICATED FISTULÆ	189
X. PROCTITIS AND PERIPROCTITIS	198
XI. ANAL FISSURE, AND IRRITABLE ULCER OF THE ANAL	
CANAL	213
XII. ULCERATION OF THE RECTUM AND SIGMOID FLEXURE	224
XIII. STRICTURE OF THE RECTUM AND OF THE SIGMOID	
Colon	243
XIV. MALIGNANT DISEASE OF THE RECTUM AND ANUS	263
XV. TREATMENT OF MALIGNANT DISEASE OF THE RECTUM	400
AND SIGMOID COLON	277
AND DIGHTOID COLON	211

riii	CONTENTS	
XVI.	THE COLOTOMIES	330
XVII	Non-Malignant Growths of the Rectum and Anus .	347
XVIII.	PROLAPSUS ANI AND PROCIDENTIA RECTI. ,	366
XIX.	Puritus Ani	389
	Syphilitic Affections of the Anus and Rectum .	
XXI.	Wounds and Injuries of the Rectum—Foreign Bodies in the Rectum—Impaction of Fæces .	407
XXII.	NEURALGIA OF THE RECTUM—COCCYGODYNIA—SINUSES OVER THE SACRUM AND COCCYA	421

# LIST OF ILLUSTRATIONS

1. Expanding Bi-valve Speculum, as used by the Author .	PAGE 18
2. Form of Bi-valve Speculum usually sold	19
2 Bi valva Chambum	
	20
4. Mummery's Anal Speculum	20
5. Kelly's Tubes as modified by the Author	21
6. Structure of the Lower End of the Rectum	36
7. Strauss's Aero-Sigmoidoscope	47
8. The Sigmoidoscope in Use	50
9. Houston's Valves as seen through the Sigmoidoscope	
(After Tuttle)	51
10. Imperforate Anus.—Pouch of Rectum near Perinæum	
(Albert)	67
11. Imperforate Anus.—Pouch of Rectum at some distance	
from Perinæum (Albert)	68
12. Imperforate Anus, with Recto - Vesical Fistula	
(Albert)	76
13. Imperforate Anus, with Recto - Urethral Fistula	
(Albert)	77
14. Imperforate Rectum, with Anus in Normal Position	
(Albert)	81
15. Diagram of the usual Position of Hæmorrhoids	90
16. Salmon's Scissors	94
17. Tag Forceps	95
18. Ointment Introducer for Use with One Hand	99
19. Ointment Introducer, with Screw Action	99

ix

)

X	LIST OF ILLUSTRATIONS	
FIG.	6.1	PAGE
20.	Salmon's Operation— Forcible Dilation of Anus	102
21.	Piles Extruded after Forcible Dilatation	103
22.	Each Pile seized with a Pair of Compression Forceps	103
23.	Right Lateral Pile being Separated with Scissors .	105
24.	Silk Ligature passed under Pile	106
25.	Ligature being tied	107
	Vulcanite Rectal Tube	116
	Gowland's Clamp	129
		131
	Allingham's Pile-Crusher and Forceps	131
		191
oy.	Diagram showing Complete Fistula, Blind Internal, and Blind External Fistula	139
21	Diagram of Fistula having its Internal Opening in the	100
01.	Anus	139
32.	Diagram of Complete Internal Fistula	140
	Diagram showing the Various Positions of Abscesses in	
	Connection with the Rectum	140
34.	Diagram showing Relations of External Opening of a	
	Fistula to Internal Orifice	143
35.	Diagram of Complete Fistula with High-Lying Sinus .	144
36.	Diagram of Typical Horse-shoe Fistula	144
37.	Syringe for Injecting Fistulous Tracks	150
38.	Gowland's Bistouries	150
39.	Probe-Pointed Directors	151
40.	Diagram for Recording Cases	152
41.	A Complete Fistula-in-Ano, with a Probe-Pointed Director	
	passed through it	153
	A Fistula being laid open	154
43.	Diagram showing Position of High-Lying Sinus between	
	Mucous and Muscular Coats	156
44.	Diagram showing Sinus or Fistula lying outside Muscular	150
4.5	Coat	156
	Insertion of Dressing after Operation for Fistula	158
10.	Diagram showing wrong Method of operating in Horse- shoe Fistula	160

LIST OF ILLUSTRATIONS		xi
47. Diagram showing the Method recommended in operat	ting	PAGE
upon Horse-shoe Fistula		160
48. A Diagram of one Variety of Horse-shoe Fistula .		160
49. Diagram of Incisions necessary		160
50. Diagram of severe Horse-shoe Fistula, with five Exter	rnal	
Openings		161
51. Diagram showing Incisions necessary for the Cure	of	
foregoing with one Division of Sphincter		161
52. Horse-shoe Fistula (Case of W. T.).		164
53. Horse-shoe Fistula (Case of J. G.)		165
54. Anterior Horse-shoe Fistula (Case of S. M.)		166
	Fis-	
tulæ	168	3-175
69. Fistula in Phthisical Subject (Case of G. C.)		179
70. Allingham's Instrument for Introduction of Elas Ligature	stic	100
71. Operation for Rectal Incontinence. Incision on both si		183
of a Patulous Anus. That on the right has be		
deepened, preparatory to next stage		187
72. Edges of Wound drawn apart with Clip-Forceps. Ins	er-	
tion of Sutures		187
73. Appearance of the Part after Operation		187
74. A Dorsal Fissure		217
75. Bistoury for Incising Fissure		221
76. Conical Rectal Bougie		251
77. Todd's Dilator		251
78. Hegar's Dilators		251
79. Microscopical Section of a Columnar-celled Carcinoma		265
80. Microscopical Section of a Villous Tumour		275
81. Posterior View of Pelvis		287
82. Parasacral Excision of the Rectum		289
83. Parasacral Excision of the Rectum		292
84. Rectorraphy after Excision	×	293
85. Perineal Excision of the Rectum		296
86. Perineal Excision of the Rectum		297
87. An Adeno-Carcinoma		327

xii	LIST OF ILLUSTRATIONS	
FIG. 88.	Carcinomatous Stricture of the Sigmoid Colon	PAGE 328
89.	Malignant Adenoma of the Rectum	329
90.	Iliac Colotomy	335
91.	Diagram of Colon held in Position by Mesenteric Suture and Rod (A. Baldwin)	337
92.	Diagram showing Closure of an Artificial Anus (A.	
	Baldwin)	344
93.	Prolapsus of Rectum	369
94.	Intussusception of Rectum	369
95.	Procidentia Recti	370
96.	Procidentia Recti (Mollière)	371
	Prolapse of the Rectum. Surrounded by Peritoneum	
	(Mollière)	373
98.	Canny Ryall's Expanding Speculum	380
99.	Amputation of Procidentia Recti (Modified from Fowler)	385
100.	Vulcanite Rectal Plug	398
101.	Condylomata	402
	Ointment Introducer	423

### CHAPTER I.

#### INTRODUCTION AND STATISTICS.

DISEASES of the rectum are very common among all classes of people; they induce many symptoms of a more or less severe kind, and are the cause of much suffering and disability: but in spite of this they are less studied than are, for example, diseases of the eye and the larynx: and, in consequence, the earlier stages of rectal disease are often neglected. It is stated, and perhaps with truth, that rectal diseases are especially prevalent among civilised communities; but only general statements with regard to peoples not thus classified are available for purposes of comparison. The difference is accounted for by supposing that many forms of rectal disease are due to sedentary habits, improper feeding, constipation, abuse of purgatives, &c. Causes of this kind are very frequent among civilised peoples, and especially among those who dwell in towns. In countries, however, in which such intestinal disorders as dysentery and diarrhea are endemic and of a severe type, it might well be expected that certain kinds of rectal disease would likewise be common. Accordingly we find that in India cases of hæmorrhoids and severe procidentia recti very often come under the care of European surgeons. A similar prevalence doubtless exists in other tropical countries, but definite information is as yet wanting.

In order to determine the relative frequency of the diseases

STATISTICS OF OUT-PATIENTS,

Disease.		I.—1872–1891.				
171500000				Male.	Female.	Total.
Fistula, not defined .				1906	1084	2990
" Sinistra				1546	510	2056
,, Dextra				1361	605	1966
" Dorsalis				561	300	861
" Perinealis				104	36	140
" Blind Internal .				282	122	404
Horseshoo				27	3	30
Sami harsashaa				7	4	11
,, with Phthisis .				35	4	39
Total Number of Cases	of	Fist	ula	5829	2668	8497
Fissure				1081	906	1987
Internal Hæmorrhoids .				3347	2165	5512
External Hæmorrhoids .				288	109	397
Thrombotic Hæmorrhoid	0	•	•	305	70	375
Syphilis of Anus	5	•	•	452	230	682
Internal Ulceration .		•		686	522	1208
Stricture			•	227	490	717
Stricture and Ulceration			•	69	94	163
Malignant Disease .		•	•	542	233	775
Pruritus Ani				816	360	1176
		•		576	184	760
Abscess, not defined .		•	•	370	22	22
Recto-Vaginal Fistula .		•	•	549	655	1204
Constipation						
Villous Tumour	. 1			12	4	16
Polypus or Polypoid Gro				136	101	237
Prolapsus Ani and Procid	ent	ia R	ecti	160	228	388
Ruptured Perinaum .				_	15	15
Malformation of Anus .				5	_	5
Foreign Body in Rectum	burg i			10	1	11
Neuralgia of Rectum .				10	13	23
Verrucæ				21	2	23
Cases not classified .				939	497	1436
Grand Total				16,060	9569	25,629

Note.—Table I., giving the cases from 1872 to 1891, was compiled from statistics which a former house-surgeon at St. Mark's Hospital, Mr. W. Phayre Ryall, kindly prepared for Sir Alfred Cooper and myself. Table II., giving the cases from 1892 to 1906, was compiled for me by Mr. Avery, recently house-surgeon at St. Mark's Hospital, who kindly spent much time

St. Mark's Hospital, 1872-1906.

•	II.—1892-	1906.	III.—1872-1906. (Tables I. and II. combined.)				
Male. Female.		Total.	Male.	Female.	Total.		
1220	204	1424	3126	1288	4414		
606	101	707	2152	611	2763		
585	92	677	1946	697	2643		
182	39	221	743	339	1082		
19	2	21	123	38	161		
105	23	128	387	145	582		
119	18	137	146	21	167		
35	9	44	42	13	55		
21	• 4	25	56	8	64		
2892	492	3384	8721	3160	11,881		
874	613	1487	1955	1519	3474		
3896	2021	5917	7243	4186	11,429		
103	48	151	391	157	548		
267	50	317	572	120	692		
106	44	150	558	274	832		
590	264	854	1276	786	2062		
52	88	140	279	578	857		
16	26	42	85	120	205		
317	118	435	859	351	1210		
936	99	1035	1752	459	2211		
499	65	564	1075	249	1324		
200-	8	8		30	30		
277	206	483	826	861	1687		
1	8	9	13	12	25		
137	70	207	273	171	444		
39	33	72	199	261	460		
_	22	22	_	37	37		
1	_	1	6	01	6		
7	2	9	17	3	20		
19	26	45	29	39	68		
16	4	20	37	6	43		
888	474	1362	1827	971	2798		
1,933	4781	16,714	27,993	14,350	42,343		

in its careful compilation. The "cases not classified" include external ulceration, ascarides, proctitis, and periproctitis; and other cases in which no such complete examination was made as can now be carried out with the aid of the sigmoidoscope.

which occur in the rectum, a tabular statement was given, in the second edition of this book, of the out-patients at St. Mark's Hospital during the twenty years 1872-1891: and to this I have added a further table, dealing with the out-patient cases which have attended there from 1892 to 1906 inclusive. numerical predominance of males over females will at once be noticed. It cannot, however, be inferred that the proportions represent the relative liability of the two sexes to rectal disorders. Many females suffering from these complaints apply for treatment at hospitals for diseases of women, and a considerable number do not come under treatment at all unless the disease be of a very painful or disabling character. It will be observed that fistula is by far the most common disorder among the patients at St. Mark's, very nearly one-third of the total number being affected therewith. It is more common among males than among females: in both sexes the dorsal form of fistula is far more common than the perinæal variety. Prolapsus ani and procidentia recti, and stricture, occur more commonly in females: whereas males are more subject than women to abscess and fistula, hæmorrhoids, syphilis of the anus, pruritus ani, and malignant disease.

The apparent infrequency of phthisis as a complication of fistula is due to the fact that the pulmonary disease is only noted in the out-patient registers when it is very marked. On admission as in-patients, all cases are subjected to a strict examination, and the condition of the lungs and other organs is noted on the cards; but, unfortunately, not entered in the register. As to horseshoe and semi-horseshoe fistulæ, notes have been kept of the former of these varieties only for nineteen years, and of the latter for sixteen years, and the numerical accuracy may well be questioned. From many observations extending over a period of years in the out-patient department, I am led to believe that semi-horseshoe fistula occurs almost as

frequently as any other variety.\* Horseshoe fistula, though also frequent, is not nearly so common; it may constitute, perhaps, 10 per cent. of all cases of fistula. In private practice the percentage would probably be lower, as patients earlier seek medical advice, and the abscess is not allowed to extend on both sides of the bowel.

The lodgment of foreign bodies swallowed with food occurs much more frequently in males than in females, the proportion in our table being 17 to 3. Among the late Mr. Goodsall's twenty-three cases,† there were twenty male to three female. Such a disproportion might be expected, owing to the difference in the rectum in the two sexes. In the female, this portion of the bowel is straighter in its lower part, and more capacious; the sphincter is also more yielding—all of which peculiarities favour the passage of foreign substances.

<sup>\*</sup> This form of fistula, when first seen in the out-patient department of a hospital, is not always recognised, its true nature being discovered only at operation.

<sup>†</sup> Goodsall and Miles on "Diseases of the Anus and Rectum" (Longmans, 1905).

## CHAPTER II.

GENERAL SYMPTOMS OF DISEASES OF THE RECTUM, AND METHODS OF EXAMINING THE BOWEL.

Before describing the various affections met with in the rectum, it seems advisable first to enumerate the symptoms which generally arise, and secondly, to point out the extent to which their presence and character serve as a guide to the diagnosis. Abnormal sensations, pain of various kinds in the bowel itself and in the back of the pelvis and legs, protrusion from the anus, discharges of blood, pus, and mucus, constipation and diarrhea, are the most common symptoms of rectal diseases, and when several of these are present, a careful examination of the part should always be made. The concluding portion of this chapter will contain a description of the manner in which such an examination is best accomplished.

In a normal condition of the part, and except during defæcation, no sensations are experienced in the rectum, which serves only as a canal for the passage of the fæces from the colon to the anus. Until shortly before an evacuation, this portion of the bowel is normally devoid of fæces, which do not pass beyond the lower end of the sigmoid flexure. When defæcation takes place, the peristaltic movements of the colon are communicated to the rectum, in which definite sensations are experienced. These, however, cease soon after evacuation of the fæces, to recur only when excited in a similar manner.

In most morbid conditions of this part of the bowel the sensory nerves are more or less violently affected, and hence alterations of sensation, varying from slight discomfort to intense pain, are among the most common symptoms. Many varieties of pain are experienced, and in examining a patient complaining of this symptom, it is well to inquire as to what relation the pain bears to the act of defæcation, viz., whether it be spontaneous or be excited by the act in question, and in the latter case, whether it precede, accompany, or follow expulsion, whether it be prolonged and continuous, or of brief duration, or intermittent. According to the answers given to these questions, some idea may be formed of the nature of the ailment.

Pain is a symptom of fissure, of hamorrhoids, of abscess, of ulceration, and of certain morbid growths in their later stages. In fissure the pain is peculiarly severe, and out of all proportion to the size of the lesion. It comes on just at the beginning of defectation, and is most intense during the act and for some time afterwards; it often lasts for several hours. It is described as of a hot, smarting, tearing character, very severe, and radiating towards the coccyx. When a patient complains of pain in the terms just described, it is almost certain that there is fissure.

Pain due to hamorrhoids varies greatly according to the condition of the parts. Piles, when not inflamed, cause at most a sense of fulness or uneasiness. A thrombotic pile always causes pain, and a sensation in the anus as if a foreign body were present. With a slight degree of inflammation, there is not only pain, but a slight sensation of heat in the part, much aggravated by pressure and during defaccation. The sensation of fulness and swelling about the rectum will also be increased, and a desire to strain is frequently added. When internal hamorrhoids become extruded beyond the sphincter, inflam-

mation is apt to be set up, and the pain rapidly becomes very severe.

In ulceration of the rectum, the pain varies according to the situation and stage of the lesion. If low down and involving the integument, the pain is always more severe than when the upper portions of the bowel are affected. In the latter case there is often discomfort rather than pain. The symptoms are aggravated during defectation.

In malignant disease there is every possible variety of pain as a symptom. At first there may be simply uneasiness, and this increases as time goes on. The first attacks of severe pain are wont to occur after exercise, and when hard fæces are discharged. When ulceration sets in, the pain becomes much aggravated, especially during attacks of diarrhea. There is a constant sensation of fulness in the bowel. The pain is of an aching character, and is usually associated with tenesmus; and, when the disease is advanced, the pain may radiate through the pelvis, and extend down the backs of the thighs. As in other rectal diseases, when the cancerous deposit is situated near the anus, the pain is always greater than when it is higher up in the bowel. In many cases of cancer of the rectum, pain is but little complained of throughout the earlier stages of the disease.

Protrusion.—In connection with the inquiries with regard to the character of the pain, the patient should be asked whether anything protrudes from the anus at the time of defæcation or upon exertion, and, if so, whether it goes back spontaneously or has to be replaced, and also whether bleeding occurs at the same time. A protrusion under such circumstances might be due to prolapse of the bowel, to internal hadmorrhoids, to polypus, or to a villous tumour. In prolapse, the whole circumference of the bowel is involved; the tumour is soft and smooth; unless ulceration be present, the protrusion is unattended by severe pain or loss of blood. In protrusion of