



John Nicholls · Richard Glass

# Coloproctology

**Diagnosis and Outpatient Management**

Foreword by John Alexander-Williams

With 49 Line Drawings by Geoffrey Lyth

Springer-Verlag  
Berlin Heidelberg New York Tokyo

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Nicholls, R. J. Coloproctology: diagnosis and outpatient management  
Includes bibliographies and index.

1. Proctology. 2. Colon (Anatomy) - Diseases. 3. Ambulatory medical care. I. Glass,  
Richard, 1948- . II Title [DNLM: 1. Colonic Diseases. 2. Rectal Diseases.  
WI 520 N615c]

RC864.N53 1985 616.3'5 85-2808

ISBN-13: 978-3-540-15140-1 e-ISBN-13: 978-1-4471-1375-1

DOI: 10.1007/978-1-4471-1375-1

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# Foreword

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In this age of specialization most patients with diseases of the hind gut and anus are still managed by general physicians or surgeons.

The speciality of coloproctology has grown from the art of 'anology', a study of conditions limited to that distance from the anal verge that could be inspected easily by torch- or candlelight or with the aid of a simple speculum. Two centuries ago many proctological ills were often treated by itinerant quacks, partly because the physician considered himself rather too grand to meddle around the anus and the medical profession in general tended to look down on those who studied anal disease.

Today, in certain countries, coloproctology has become a speciality every bit as exclusive as urology or orthopaedic surgery, with its own training programme and examinations, usually undertaken after the end of general surgical training. Such super-specialization has undeniable advantages with rapidly advancing technology and therapeutic possibilities. There is no doubt that for the patient suffering from a low rectal carcinoma or severe inflammatory bowel disease there are advantages in being treated by surgeons who are dealing with several cases in a year rather than by a general surgeon who sees such problems relatively rarely. Such specialized colorectal surgery units makes good sense medically and economically in large centres of population with good communications.

In the world at large, however, even including many parts of Europe and America, anorectal disease will continue to be assessed and treated by surgeons and physicians whose post-graduate training has been broadly based. In the course of a year such a practitioner may have to treat four or five cases of prolapsing haemorrhoids, twice as many of pruritus ani and one or two of anorectal sepsis. He or she may have to evaluate twenty patients with bright red rectal bleeding and two or three with bloody diarrhoea. This is not enough work to justify

establishing a special unit, but it is vitally important work for the community, which deserves the very best of modern care and management. The community rightly expects its generalist physicians and surgeons to be of the highest standard, yet they cannot undergo extensive post-graduate training in every speciality nor attend every post-graduate course.

Those who deal with even a few colorectal and anal lesions each year can equip themselves with this handy textbook of coloproctology. Although it is essentially geared to outpatient management and assessment and is aimed at the doctor practitioner in a rectal clinic, it contains sufficient up-to-date information about all large bowel and anal diseases to give a firm grounding, even though it deliberately gives no operative details. Some might say that the general surgeon should not undertake such operative procedures as rectopexy, post-anal repair or low anterior resection and some would say that general surgeons should not undertake restorative proctocolectomy or ileo-anal procedures. Those who perform have to, must study the most modern original articles or refer to surgical and technical encyclopaedias. All surgeons and physicians dealing with the assessment and primary treatment of disease of the distal large bowel need to be equipped with this book.

Birmingham, 1985

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# Preface

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A major part of general surgery and gastroenterology involves the treatment of diseases of the colon and rectum—so much so that the rectal clinic has become a feature of many hospitals and colorectal surgery has now been accepted as a speciality. There are many detailed reference books dealing with diseases of the anus, rectum and colon, but a more practical approach to their diagnosis and management in the outpatient department could be helpful.

The book has been written in an attempt to assist young surgeons and physicians in training. It is aimed both at those for whom colorectal disease is included in a general surgical or gastroenterological education and at those who will confine themselves chiefly to anal problems. Emphasis is placed on essential aspects of diagnosis, assessment and treatment of patients in the outpatient department. Inpatient management is referred to only where it might influence the outpatient consultation and details of operative technique are avoided unless the procedure can be carried out in the rectal clinic.

The management of colorectal disease has advanced considerably in the last 10 years and the book has embraced progress by putting it in the context of modern practice. The book's form has forced the authors to be didactic, but references to recent publications have been offered as a guide to further reading.

The authors would like to thank Miss J. Grimsey and Miss D. Tolfree for their help with the manuscript.

London, 1985

John Nicholls  
Richard Glass

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# 1 The Rectal Clinic

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## **Facilities**

Diagnosis and successful treatment of diseases of the anus, rectum and colon depend to a considerable extent on a well-run outpatient department. This should provide a suitable examination suite, adequate equipment and efficient nursing.

Much depends on the nurse in charge, who should be responsible for the co-ordination of patient movement within the clinic, the delegation of duties to her nurses, and the immediate administration of notes, investigation requests and biopsy specimens. It is clearly preferable if the nurses are long-standing members of the department, but this may be difficult in teaching hospitals, where they tend to move from one appointment to another after a few weeks. The nurses should understand the nature of the diseases encountered and their treatment, be able to position patients correctly, look after equipment and be ready to receive biopsy and stool specimens. At least two nurses should be instructed in the cleaning, care and simple maintenance of the flexible sigmoidoscope. Commitment can be encouraged by showing the nurses lesions and allowing them to look down endoscopes.

The general arrangement of the rectal clinic must offer privacy for the patient and adequate heating. The basic requirements are a waiting area, examination rooms with at least one adjacent changing room each, a wash area for cleaning instruments, a sluice, an area for the sister and at least two lavatories. Flexible sigmoidoscopy requires bowel preparation by a disposable enema and usually takes several minutes to perform. It is therefore preferable to set aside for this examination a separate endoscopy room, which should also be equipped with a sink and draining board and have space for cleaning and storing the equipment. In many hospitals there is an endoscopy room in the outpatient department suite.

## Equipment

An examination couch with a firm surface sufficiently high for the examiner to sit comfortably is essential. Special proctological tables are available. The Ritter examination couch (Ritter, USA) has an electrically operated hydraulic raise-and-tilt mechanism and can be broken in two places to accommodate a modified knee-elbow position. Special tables with leg attachments for lithotomy position examinations are also available (Wolfe, West Germany).

Two trolleys should be available, the first for equipment for digital examination and rigid sigmoidoscopy and proctoscopy (Fig. 1.1) and the second for equipment for flexible sigmoidoscopy (Fig. 1.2). Trolley 1 should be placed at the foot of the examination couch within easy reach of the examiner. Trolley 2 can either be placed on one side and moved to the couch when flexible sigmoidoscopy is performed or kept in the endoscopy room.

A sucker is needed, particularly if the bowel is prepared before examination since the rectum often contains liquid from the enema.

### Rigid Sigmoidoscopes

Rigid sigmoidoscopes can have either distal or proximal lighting. The former type has the disadvantage that the bulb may become coated with faeces. The various

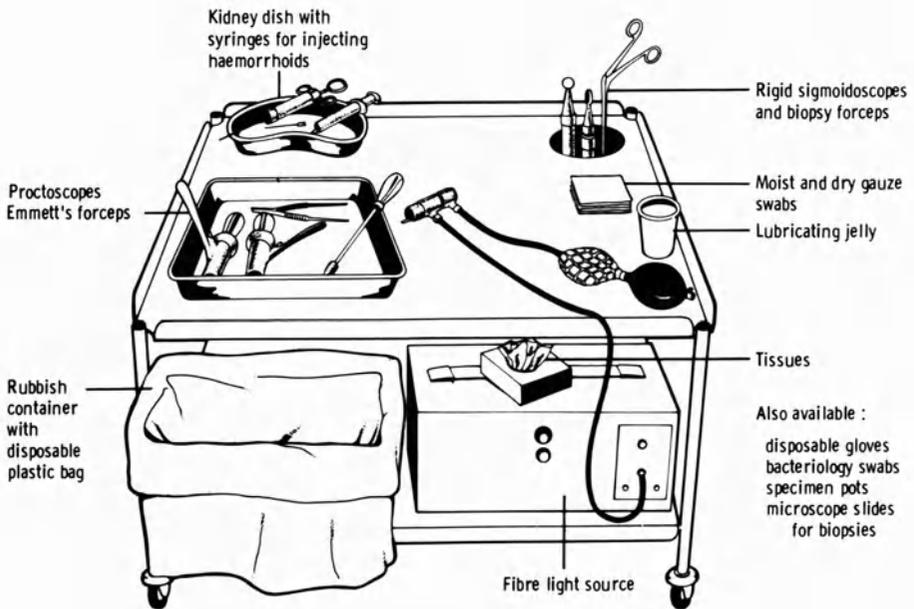


Fig. 1.1. Equipment for digital examination, rigid sigmoidoscopy and proctoscopy.

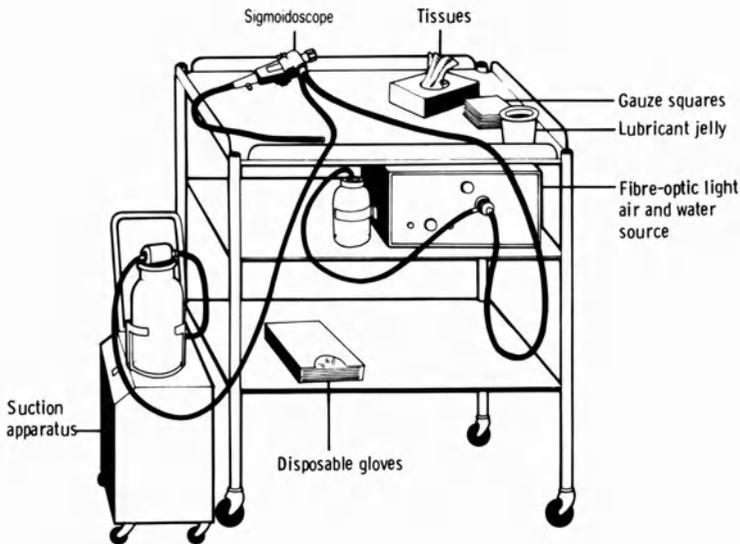


Fig. 1.2. Equipment for flexible sigmoidoscopy.

designs of sigmoidoscopes with proximal lighting all have certain common features. Lloyd Davies's pattern is shown in Fig. 1.3 and is excellent for routine use. Various lengths and diameters are available but the 25 cm long instrument of 15 mm bore is most satisfactory for general work. A wider bore (20 mm) instrument 20 cm long enables a more detailed examination of the rectum, but is more uncomfortable for the patient. The paediatric sigmoidoscope with a diameter of 9 mm may be useful in adults with painful anal lesions since it is almost always possible to introduce this smaller instrument into the rectum without exacerbating pain.

A fibre-optic lighting system is preferable to a battery-powered arrangement. It is more reliable and the intensity of light is greater. Bulbs and the fibre-optic flex may need replacing from time to time; the life expectancy of the latter is diminished by twisting or kinking, which fracture fibres in the bundle. Unless well maintained, battery systems often fail owing to faulty connections in the wiring and a tendency for bulbs to blow if the current is increased too rapidly on adjusting the rheostat. They can, however, be used where no power socket is available.

Biopsy forceps with trephine cusps of both elongated and rounded shape should be available. The Patterson and Chevalier Jackson models (Fig. 1.3) are suitable examples of each type. Besides being used for taking biopsies, they can also hold small gauze swabs for cleaning the lumen down the sigmoidoscope. An alternative method of cleaning the sigmoidoscope is to use specially prepared disposable cotton wool swabs mounted on long sticks.

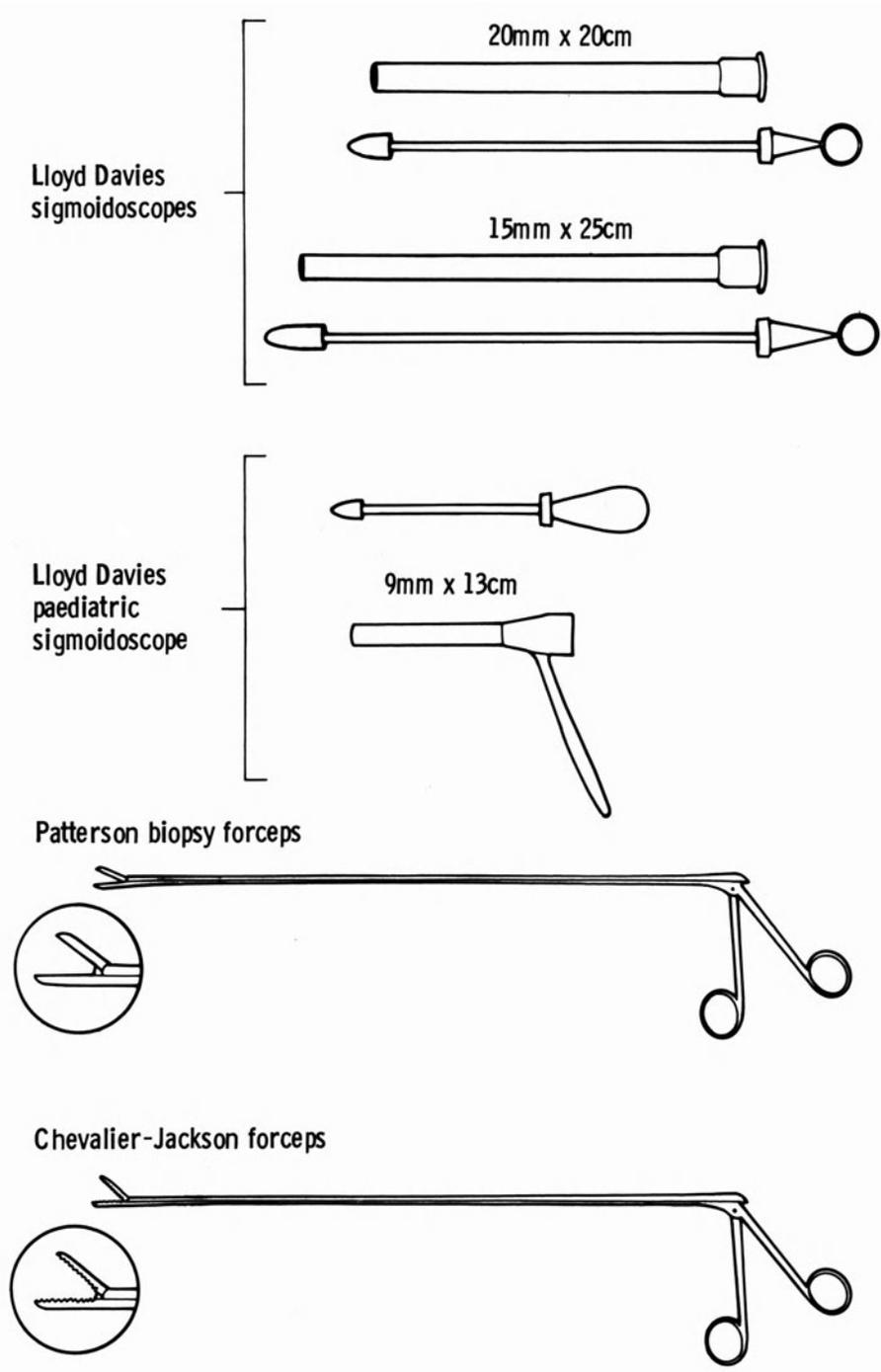
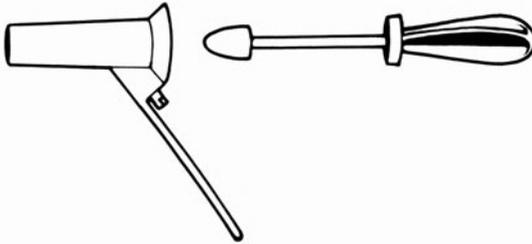


Fig. 1.3. Rigid sigmoidoscopes and biopsy forceps.

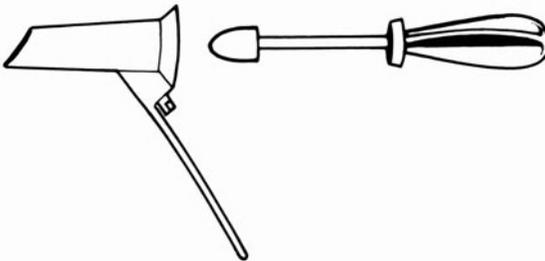
**Proctoscopes (Fig. 1.4)**

The bigger the proctoscope which can be passed, the better the view obtained. For general use the type of instrument designed by Naunton-Morgan is suitable; it measures 7 cm in length and 21 mm in diameter, and affords a transverse view of the lower rectum and anal canal. In addition it is essential to have a

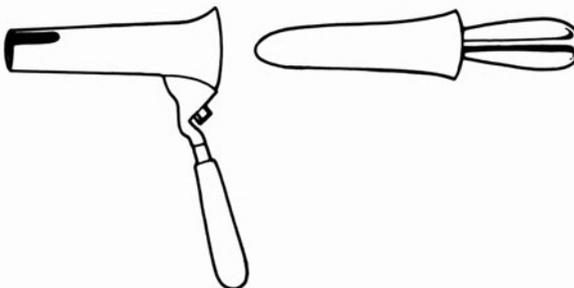
Naunton-Morgan



Graeme Anderson



Abel



Emmett's forceps



**Fig. 1.4.** Proctoscopes and Emmett's forceps.

proctoscope which will give an oblique view of the anal canal. The Graeme Anderson proctoscope has a bevelled end and is particularly useful when searching for the internal openings of fistulas or assessing the healing of surgical wounds in the anal canal. The Abel proctoscope (Thackerey) has a 3 cm slot cut into the side that allows mucosa and haemorrhoidal tissue to bulge into the lumen of the instrument, which is useful for injection sclerotherapy.

Illumination provided by a fibre-optic source is excellent but it is usually adequate and more convenient to use an adjustable lamp (Anglepoise) at the foot of the couch. The lumen of the proctoscope can be cleaned by gauze swabs held on long non-toothed forceps such as Emmett's forceps. There is little place for adjustable anal specula in the outpatient department.

### Flexible Sigmoidoscopes

It has been possible for many years to visualise the rectum and often the lower sigmoid colon by rigid sigmoidoscopy, but the introduction of the flexible sigmoidoscope has allowed the direct examination of the whole left side of the colon in many cases. This is a considerable advance since most colonic lesions arise in this part of the bowel.

Flexible sigmoidoscopes are made by all manufacturers of fibre-optic medical instruments. There are slight differences between the models—for example in length (60–75 cm) and in the flexibility of the shaft and the umbilical. The parts of a typical instrument are shown in Fig. 1.5. The instrument should be handled with care. The delicate fibre-optic bundle is damaged by kinking (which causes

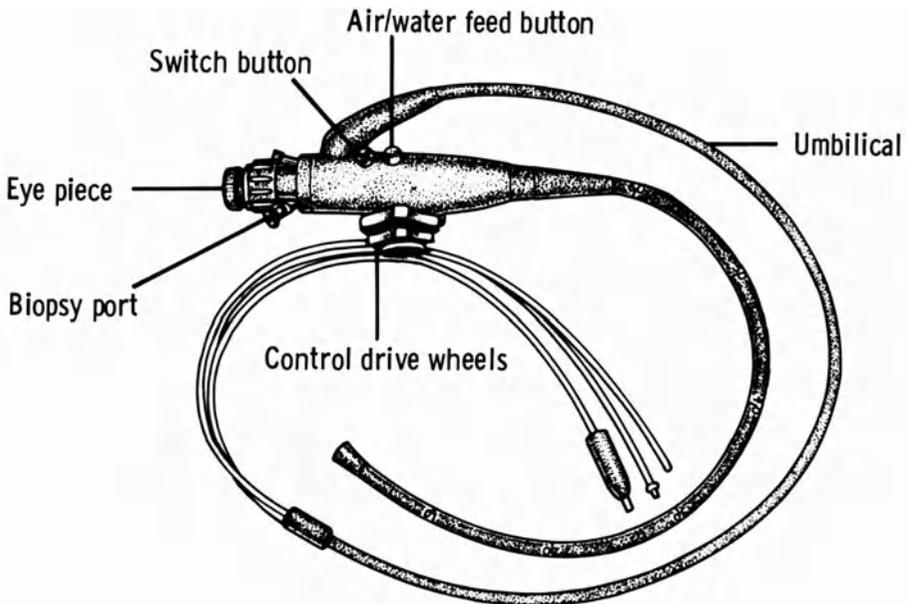


Fig. 1.5. Flexible sigmoidoscope: essential features.

fracture of the fibres), the wires from the drive wheels controlling movement of the tip may become strained with excessive angulation and poor cleaning will result in blocking of the channel. Most instruments are fitted with an automatic water feed, but some are not. Air supply and lighting are provided from a combined air/light source unit and a separate suction pump is available although any standard suction apparatus is satisfactory. Biopsy forceps, cleaning brushes and spare diaphragms for the biopsy port are also supplied. Teaching attachments and a camera are available too. Photography, however, requires a special high-intensity light source. Servicing can be arranged with the manufacturer's local agents and is advisable after every 100 examinations.

### **Miscellaneous Equipment**

The following equipment should also be available.

#### *Treatment of Haemorrhoids*

- Syringes with straight and angled needles for injection of sclerosant
- Solutions for injection sclerotherapy (5% phenol in arachis oil, sodium tetradeccate (Thrombovar))
- Rubber band ligation set
- Cryoprobe (optional)
- Infrared coagulator (optional)

#### *Specimens*

- Specimen pots containing formalin (10%) for biopsies
- Sterile specimen pots for the collection of pus, faeces etc.
- Bacteriological swabs and transport media

#### *Dressings*

- Dressings and finger cots for the management of surgical wounds at home

#### *Cleaning of Instruments*

Metal instruments, including rigid endoscopes, must be thoroughly washed in antiseptic solution (e.g. cetrimide 1%) and rinsed in water. They should then be boiled for 5–10 minutes.

Thorough cleaning of the flexible sigmoidoscope is important to keep the channel and internal tubing of the instrument clear and to reduce bacterial

colonisation to a minimum. It should be cleaned before starting the session and immediately after an examination. Water should be sucked through and the suction channel cleaned with a brush mounted on a wire introduced via the biopsy port. The biopsy port is unscrewed and cleaned and the shaft and channel are washed with a soap solution, exposed to a solution of glutaraldehyde (Cidex 2%) for 2–3 minutes and then washed in water and dried. This procedure must be carried out between each examination, and at the end of the clinic the shaft is immersed in glutaraldehyde for at least 10 minutes and washed and dried. Gloves must be worn to avoid contact with the glutaraldehyde, which can cause skin eruptions and irritation of mucous membranes. The head and umbilical of the instrument should not come into contact with water or antiseptic agents, but can be cleaned with alcohol (70%).

## Minor Operations

Certain surgical procedures can be performed in the rectal clinic; these include excision of skin tags, excision or drainage of a perianal varyx and drainage of abscesses. The authors feel that sphincterotomy for anal fissure should be carried out under general anaesthetic, perhaps as a day case procedure, but accept that many surgeons consider local anaesthesia satisfactory.

## Instruments

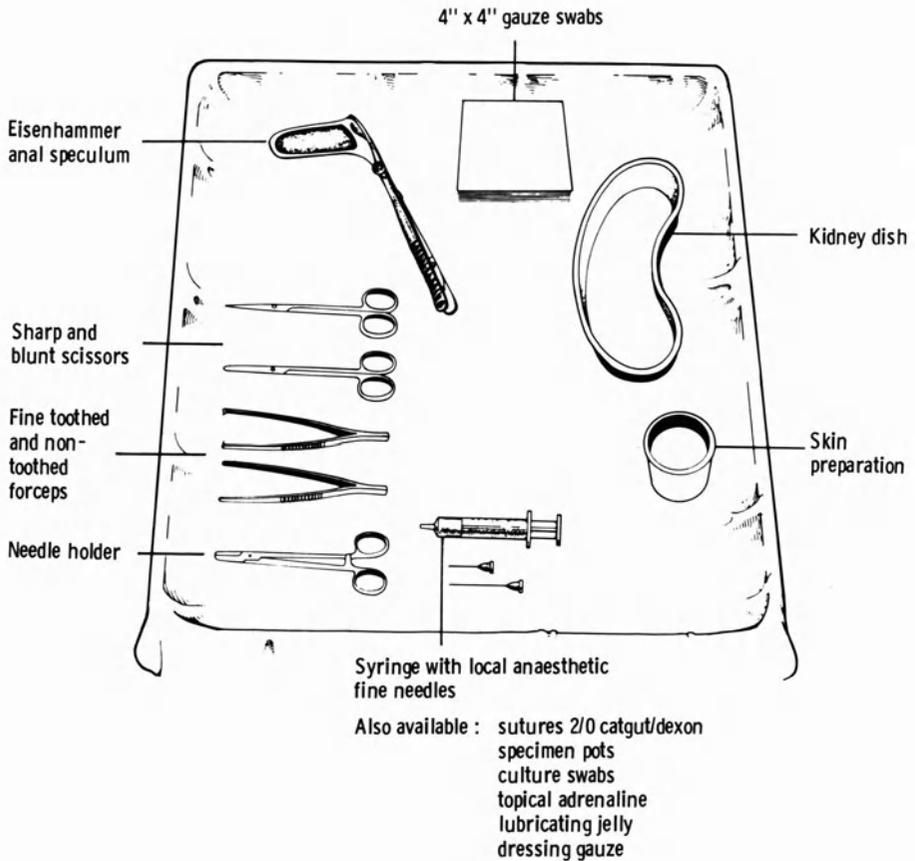
Good illumination and well-kept surgical instruments are necessary. The practice of supplying the rectal clinic with rejects from the main operating theatre should be discouraged as the circumstances of an outpatient procedure may not be ideal and blunt or unsuitable instruments only add to any difficulty. Many more outpatient procedures would probably be performed if adequate facilities and equipment were available.

The necessary instruments are shown in Fig. 1.6. For obtaining exposure for intra-anal procedures the Eisenhammer anal speculum is recommended. It is easy to introduce and remove and gives excellent access.

Fine-toothed and non-toothed forceps, sharp-pointed scissors and a selection of absorbable sutures (for example plain catgut or Dexon (2/0)) should be available. A small needle holder, a pair of suture scissors and a fine probe complete the basic equipment.

## Local Anaesthesia

Lignocaine (1%) is usually satisfactory as a local anaesthetic, although the surgeon may wish to use lignocaine with adrenaline in a concentration of 1:200 000 for its haemostatic effect. Lignocaine is a cardiac depressant and the



**Fig. 1.6.** Instruments required for minor anal operations.

dose is limited to 250 mg where plain local anaesthetic is used and to 400 mg where local anaesthetic is combined with adrenaline.

Local infiltration of 5–10 ml is satisfactory for small lesions. Where the procedure is more extensive (e.g. sphincterotomy) the additional injection of 10 ml of lignocaine into each ischiorectal fossa will give enhanced anaesthesia and relaxation of the anal sphincter by blockade of the inferior haemorrhoidal nerves.

### Preparation

Written consent by the patient must be obtained. Preparation of the bowel by glycerine suppositories or a disposable phosphate enema is sufficient to empty the rectum.

Operations can be carried out with the patient in either the lithotomy or the left lateral position. In the latter case an assistant will be required to display the anus by traction on the upper buttock. Chlorhexidine (1%) in aqueous solution is a satisfactory skin preparation; under no circumstances should a spirit-based antiseptic be used.

## **Further Reading**

- Bouchier IAD, Allan RN, Hodgson HJF, Keighley MRB (eds) (1984) Textbook of gastroenterology. Baillière Tindall, London
- Goldberg SM, Gordon PH, Nivatvongs S (1980) Essentials of anorectal surgery. Lippincott, Philadelphia
- Goligher JC (1984) Surgery of the anus, rectum and colon. Baillière Tindall, London
- Thomson JPS, Nicholls RJ, Williams CB (eds) (1981) Colorectal disease. Heinemann, London

# 2 Examination

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Almost all conditions affecting the anus and rectum can be diagnosed on physical examination, and in many cases disease of the left colon can be identified by flexible sigmoidoscopy. The examination should be carried out in the following order:

General examination

Inspection and palpation of perineum

Anorectal examination

Rectal digital examination

Rigid sigmoidoscopy

Proctoscopy

Flexible sigmoidoscopy

Rigid and flexible sigmoidoscopy give only a partial examination of the large bowel and further investigation is required if there is suspicion of more proximal disease.

The results of the examination should be recorded systematically and it is helpful to use a prepared examination sheet along the lines of that shown in Fig. 2.1. Printed diagrams to record findings are useful.

## General Examination

A general examination of the patient is important as many diseases of the large bowel, rectum and anus have systemic manifestations. Lymphadenopathy,

## EXAMINATION

General Condition

Abdomen

Inguinal Lymph Nodes

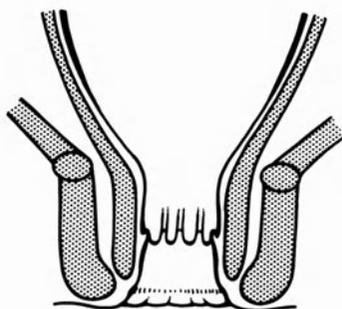
## Ano-rectal Examination

Inspection

Skin  
Perineal descent  
Anal reflex

Palpation

Sphincter resting tone  
Voluntary contraction  
Cough reflex  
Levator wasting

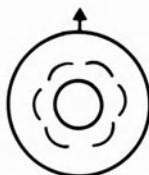


Sigmoidoscopy

To            cm

Biopsy at            cm

Proctoscopy



Flexible sigmoidoscopy

To            cm

Biopsies            cm

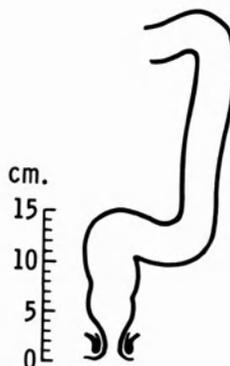


Fig. 2.1. Examination sheet.

anaemia, hepatic enlargement and abdominal masses and distension may occur in both malignant and inflammatory bowel disease. Lymph nodes, particularly in the supraclavicular and inguinal areas, should be examined. Inguinal lymphadenopathy may be present in anal carcinoma or anorectal sepsis. In inflammatory bowel disease arthropathy, uveitis, and skin lesions such as erythema nodosum and pyoderma gangrenosum and oral ulceration may

develop; liver disease in the form of chronic hepatitis, cirrhosis or sclerosing cholangitis occurs in about 5% of cases. Clubbing of the finger nails is often seen in Crohn's disease.

Patients may be wasted and show signs of malnutrition. In the severely ill subject an assessment of the state of the circulation and of water and electrolyte depletion is essential. A general neurological examination may be relevant.

## Anorectal Examination

Anorectal examination is everyday practice to the doctor but to patients it is an unusual event. Many are embarrassed and fear that it will be painful. The clinician's first task, therefore, is to gain the confidence of the patient. An unhurried demeanour, taking time to listen to the patient's story, explaining in advance the sequence of examination and what the patient may feel at each stage, help to allay anxiety. The room should be well heated and a small blanket covering the thighs may make the patient feel less exposed.

### Position of the Patient

Three positions for the patient are in general use: the left lateral, the knee-elbow and the lithotomy. Although the choice is largely determined by the habit and training of the clinician there are advantages and disadvantages to each.

With the patient in the left lateral position inspection of the perineum, digital examination and sigmoidoscopy are simple and the patient can lie in a relaxed and comfortable attitude. This is an advantage, particularly with old or frail patients or when the examination is made at the bedside. Access for the clinician is excellent provided the patient is correctly placed, and procedures such as injection or rubber band ligation of haemorrhoids or rectal biopsy can be carried out with ease. Patients with pelvic floor disorders including rectal prolapse are best examined in the left lateral position since they can strain down or contract the sphincter without difficulty when asked to do so by the examiner.

The knee-elbow position gives an excellent view of the rectum and passage of the rigid sigmoidoscope past the rectosigmoid junction may be easier than with the left lateral position since the sigmoid colon tends to fall towards the anterior abdominal wall, straightening the rectosigmoid angle. The position is, however, uncomfortable for some patients and is generally less well tolerated than the left lateral position.

The lithotomy position gives an excellent view of the anterior perineum as well as the anus but a special table is required and assessment of the pelvic floor muscles may be difficult. It is, however, a suitable position for operative treatment of some conditions of the rectum, anus and perineum.