Procedures in Practice

D J ELLIS
P G BEVAN

PROCTOSCOPY AND SIGMOIDOSCOPY

Uses

Both proctoscopy and sigmoidoscopy are used for diagnosis, treatment, and follow-up. Lesions of the anal canal and rectum and lower sigmoid colon can be diagnosed and biopsy carried out. Rectal swabs are sent for bacteriological studies or specimens of faeces for identification of parasites. Internal haemorrhoids can be treated by injection through a proctoscope and excision or diathermy of small localised lesions carried out through a sigmoidoscope. Follow-up examinations are useful to show whether inflammatory conditions are subsiding, persisting, or worsening. The response to medical treatment can be monitored—for example, improvement in non-specific proctitis after a course of steroid enemas.

Indications

Proctoscopy or sigmoidoscopy, or both, should be carried out on all patients who complain of the following symptoms: piles; rectal bleeding; change of bowel habit, especially recurring attacks of diarrhoea; pain or difficulty in defecation; lesions around the anal opening (abscesses, fistulae, discharge, ulcers, external piles, pruritus); and prolapse.

Preparation

Pre-examination bowel preparation is generally unnecessary and may disguise abnormalities by producing oedema of the rectal and colonic mucosa. It may, however, be necessary in patients with heavy faecal loading of the distal colon and rectum. A normal bowel action should be encouraged on the morning of the examination.

Proctoscopy

Proctoscopy can be done without difficulty or discomfort in the doctor's surgery or outpatient clinic without general anaesthesia. It is important to ensure that the patient is lying in the correct position, and is comfortable and relaxed. The left lateral position is usually advocated, with the bottom pushed backwards and both hips flexed, the right leg above the left to tilt the anal opening upwards.

It is essential to insert the lubricated forefinger through the anal canal and examine the lower part of the rectum before attempting to pass a proctoscope or sigmoidoscope. Anal stenosis or severe pain on digital examination is a contraindication to the passage of either instrument.

The calibre of the anal canal should be judged at the preliminary examination with the index finger, and too large an instrument should not be used. An adequate source of light must be available before the proctoscope is inserted—this may be a bright torch or Anglepoise lamp, or a side bulb built into the proctoscope. A straight pair of artery forceps should be at hand holding a pledget of damp cotton-wool to clean the mucosal surface or remove faecal matter through the proctoscope. The proctoscope should first be warmed under the hot tap, dried, and well lubricated. It is passed by pushing the head of the trocar firmly but gently through the anal canal in the direction of the umbilicus, and when through the anus it is turned in the direction of the patient's head and inserted to the hilt. The trocar must be kept fully engaged in the proctoscope during insertion to avoid nipping the anal mucosa. Close inspection is made as the instrument is withdrawn, firstly of the lower rectal mucosa and then of the anal canal, noting any haemorrhoids bulging into the lumen of the proctoscope or the linear raw area of a fissure.

Injecting internal haemorrhoids—An injecting proctoscope is used for this procedure and rotated so as to allow the pile to bulge into the side aperture. Through a special haemorrhoid needle 3-5 ml of 5% phenol in oil is injected submucosally into the base of the pile; the injection must not be intravascular.

Sigmoidoscopy

Complete visualisation of the rectum and lower sigmoid colon usually needs a general anaesthetic. The lithotomy position is most commonly used, with a head-down tilt to the table. The lower abdomen should first be palpated for the presence of a mass; digital palpation of the rectum then follows, and finally bimanual palpation with the right index finger in the rectum and the left hand on the lower abdomen. The prone jack-knife position has its advocates but precludes abdominal palpation. Sigmoidoscopy can be done without a general anaesthetic in the left lateral position, and a transparent disposable plastic sigmoidoscope is probably the best and most comfortable instrument for this, although passing the rectosigmoid bend may be so painful as to be impossible. The traditional sigmoidoscope has a proximal bulb light, but the newer fiberoptic model with a circular distal light is to be preferred. The insufflating bulb is an important part of the instrument, as the upper half of the rectum and lower sigmoid can be seen clearly only when air is blown in to distend the lumen. A long alligator biopsy forceps should be available and also a long pledget-holding forceps for cleaning the mucosa.

As soon as the end of the sigmoidoscope has penetrated the anal canal the trocar is removed, the inspecting end closed, and examination of the rectal mucosa carried out carefully from below upwards. When the upper rectum is reached the end of the sigmoidoscope is moved to the patient's left, backwards, and then forwards to round the rectosigmoid bend into the lower sigmoid colon. It is vital to get a clear view of this area, as it cannot be felt digitally per rectum or by lower abdominal palpation. The operator must be prepared patiently to clear the rectum of faeces by digital removal, scooping them out in the sigmoidoscope or using pledgets on long-handled forceps. A sucker must always be available but used gently and its end guarded with a rubber tube. The instrument must never be forced upwards, and blanching of the mucosa is a danger sign.

The mucous membrane is inspected for colour, texture, and mobility. Erosions, ulcers, adenomas, polyps, and the raised edge of a carcinoma are looked for and biopsy specimens taken. The barrel of the sigmoidoscope is calibrated in centimetres, and the distance of any lesion from the anal verge must be noted. Rectal biopsy specimens should normally be taken posteriorly 6-8 cm from the anal verge; high anterior biopsies run the risk of perforation. The presence of blood and pus in the lumen should be noted and also the colour, consistency, and shape of the faecal masses—for example, diverticular disease can be diagnosed by finding a contracted corrugated faecal cast. Proctoscopy should be done after sigmoidoscopy, as anal lesions may be missed through the sigmoidoscope.

Final steps

If stretching of the anal canal needs to be carried out for anal stenosis this should be done after sigmoidoscopy (but before proctoscopy). All findings must be noted carefully, and this is usually done in diagrammatic form.

Mr D J Ellis, MD, FRCS, is senior surgical registrar at the General Hospital, Birmingham, and Mr P G Bevan, MB, FRCS, is consultant surgeon at the Dudley Road Hospital, Birmingham.