RIGID PROCTOSIGMOIDOSCOPY

Pages with reference to book, From 192 To 194

Ziauddin Shamsi, Mohammad Aftab Anwar, Naeemuilah Khan (G.I. Consultants, 5/15 Rimpa Plaza, Karachi.)

DEFINITION

Rigid Proctosigmoidoscopy is a procedure that directly visualizes the lumen (mucosal lining) of the rectum and most of the sigmoid colon, using a rigid instrument.

INDICATIONS

Diagnostic

1. Unexplained symptoms like rectal bleeding, diarrhoea, constipation.
2. To confirm or diagnose abnormality seen in rectosiginoid on barium enema.
3. Diagnosis of inflammatory bowel diseases like ulcerative colitis.
4. Biopsy or cytology of a lesion.

Therapeutic

1. Polypectomy
2. Removal of foreign body.
3. Electrocoagulation of bleeding points.
4. Electric fulguration of small lesions.

PREPARATION

1. Procedure should be explained in simple words, and reassuted.

2.Generally no preparation of bowel is required. An enema may wash away blood, mucus and pus and make it difficult to ascertain the level of bleeding. An enema, however may be necessary in certain patients with fecal impaction or where satisfactory examination is not possible inspite of swabbing and suction of stool.

3. Premedication is generally not required. Topical anaesthetic lubricant may help in patients with painful anal lesions.

4. Patients should be draped in a clean sheet wrapped in a circular manner to cover the back and legs to expose only buttocks.

5. Instruments should be arranged within easy reach. An assistant usually a nurse, hands over instruments to the examiner.

Place of Procedure

Examination can be done in endoscopy room with a special tilt table, doctor's office or on patients bed.

Position of the Patient

Procto-sigmoidoscopy can be done in any of the following positions.

Left Lateral Position (SIM'S)

This position can be used to do sigmoidoscopy on patient's bed or examination table in the office. Patient lies on the straight table with left side down with hips fully flexed and knees drawn to 900 angle with the body. The hipé are best kept at the edge of the bed to provide room for the examiner to manipulate the instrument during examination. Examination in this position needs some experience and is not recommended for beginners (Figure 1).

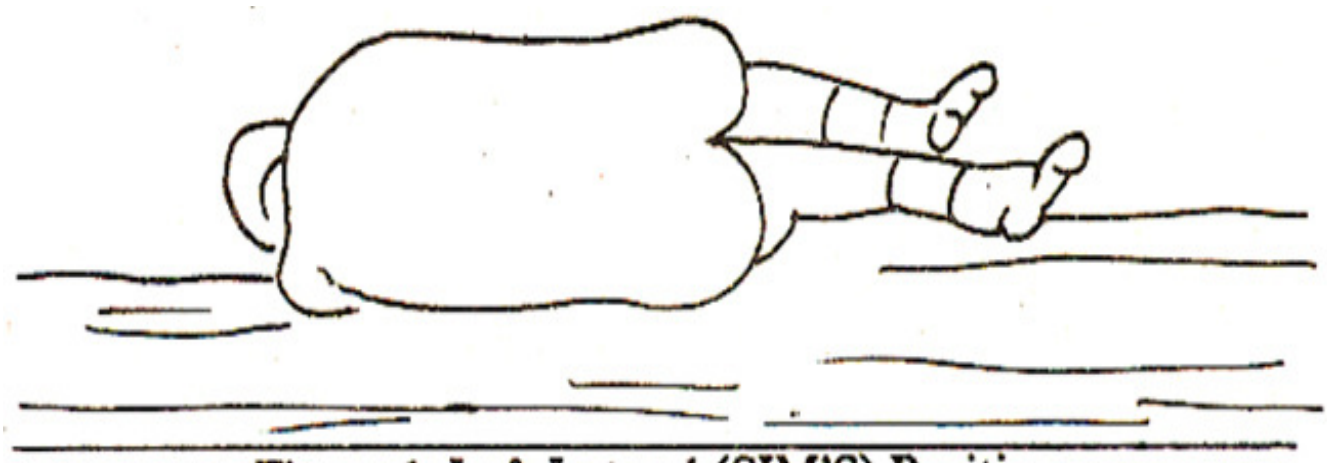

Figure 1. Left Lateral (SIM'S) Position.

Knee Chest Position

Knee chest position may be used on a straight table or a multi- purpose tilt table (Jack knife prone position) as shown in Figures 2 & 3.

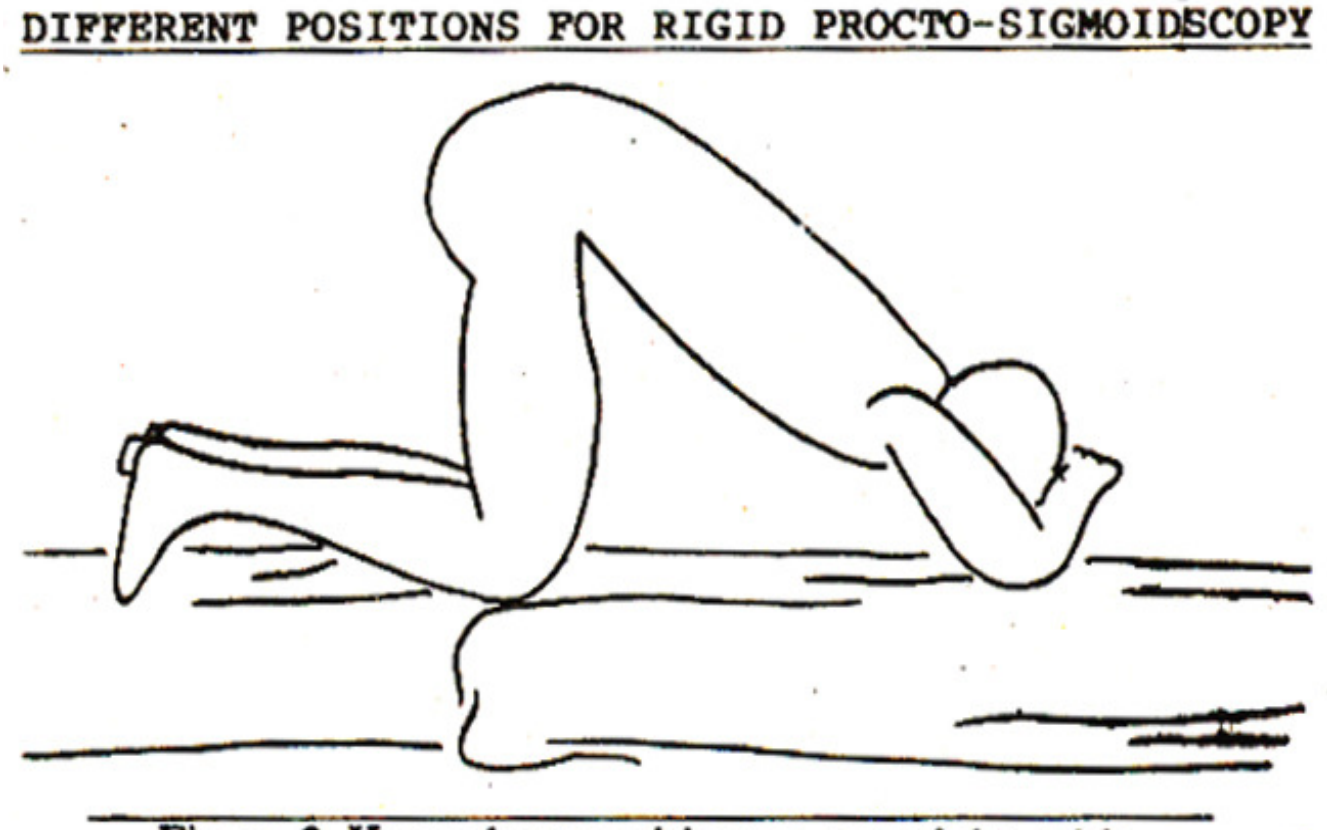

Figure 2. Knee chest position on a straight table.

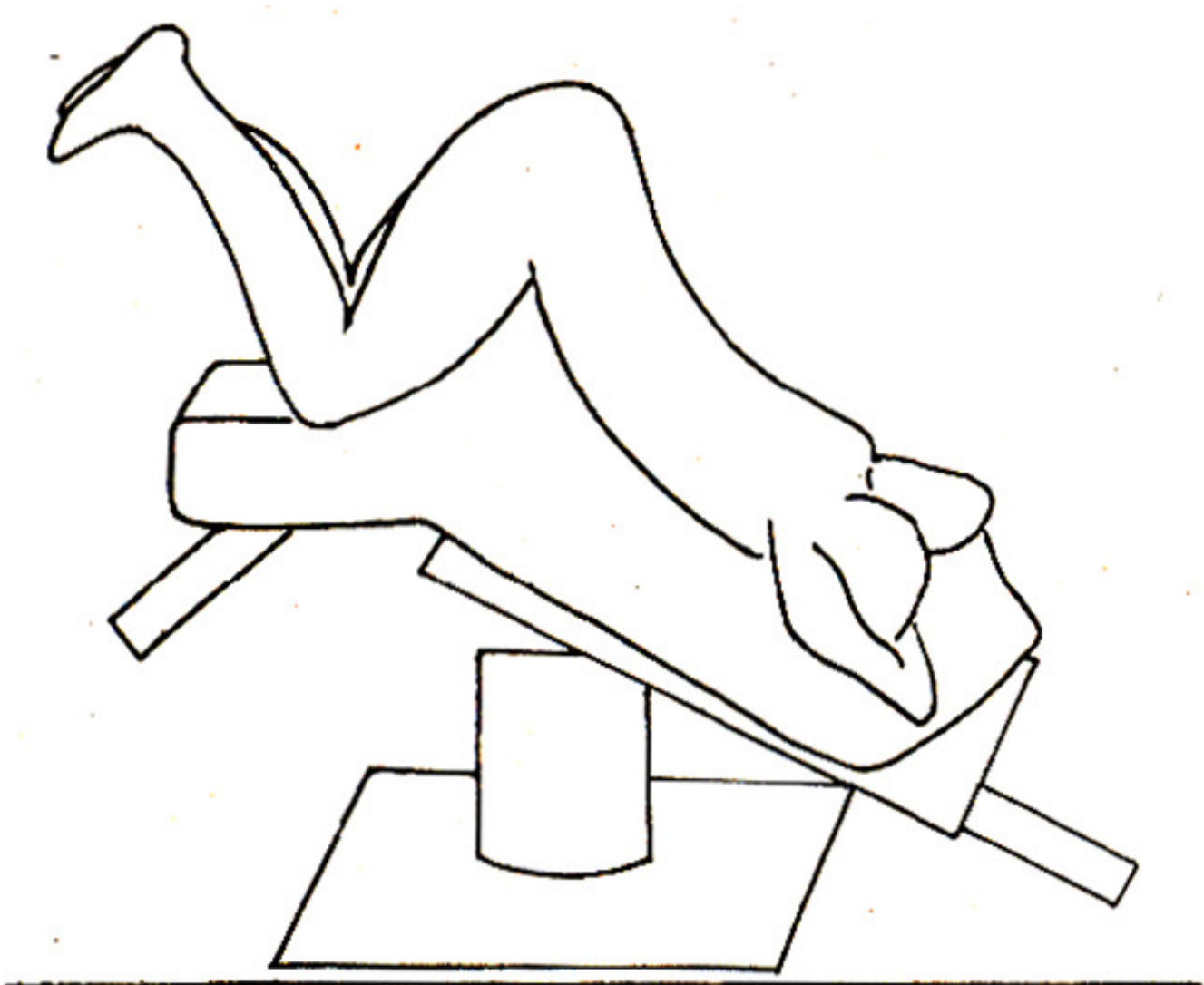

Figure 3. Knee chest (Jack knife prone) position on a tilt table.

Examination in this position is easy and one hardly needs to pump air during exantation as it spontaneously finds its way there.

MATERIAL

1. Rigid Sigmoidoscope.
2. Suction Machine and rubber tubing.
3. Gloves, Gauzes, Cotton rectal swabs.
4. Lubricant.
5. Biopsy bottles with fixatives.
6. Glass slide with cover slips.
7. 50cc syringe.

PROCEDURE

Instrument

A standard sigmoidoscope consists of a rigid tubular plastic or metallic instrument about 25cm long (calibrated on its external surface) and 13 to 16mm in diameter alongwith an obturator. Newer scopes have a brighter proximal fibreoptic light (in comparison to distal illumination in older scopes) with a magnifying lens and a connection for air insufflation. A sigmoidoscopy set also includes air insufflation

bulb, grasping biopsy forceps and a suction cannula.

Technique

Procedure should be preceded by careful inspection of perineum. Palpation of peri-anal area with an unlubricated finger and then careful and gentle digital examination of ano-rectal canal with a lubricated finger in a systemic fashion, to detect any luminal or extra-luminal pathology and judge the tone of anal sphincter. The well lubricated scope is held in right hand with the thumb pressed against the obturator so that it does not slip back as the scope is introduced. The scope is placed at the opening of the anal canal and held there for a moment, then with a gentle pressure with scope pointed towards umbilicus scope is introduced into the anal canal. When tip of the scope reaches the ann-rectal ring it should be deflected posteriorly to follow the lumen at the ano-rectal angle (Figure 4).

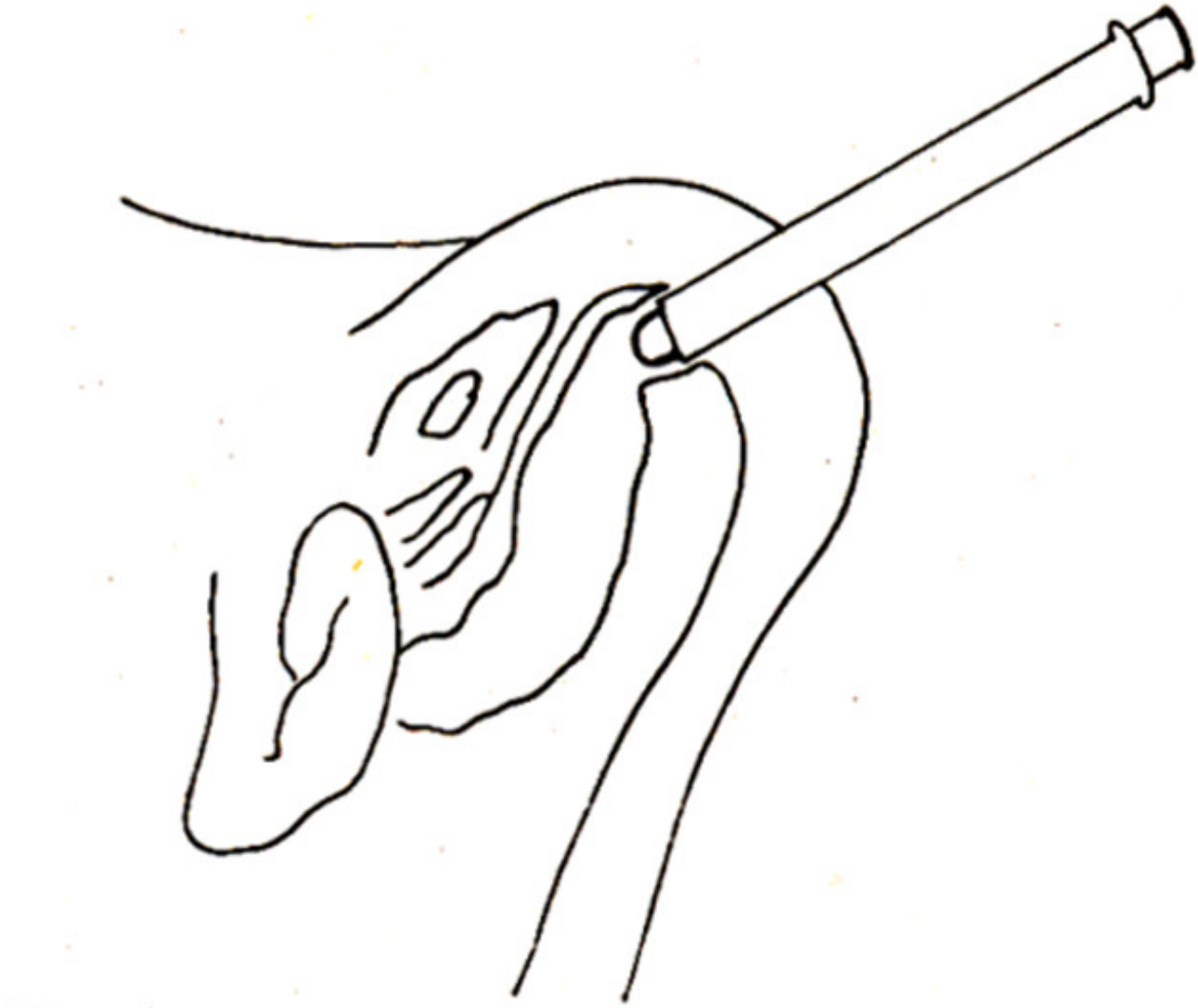

Figure 4. The scope introduced with the obturator through the opening of Anal Canal pointing towards umbilicus.

At this point obturator is removed and the scope is introduced with lumen in view all the time. Some air insufflation may be necessary specially when examination is done in left lateral position (Figure 5 & 6).

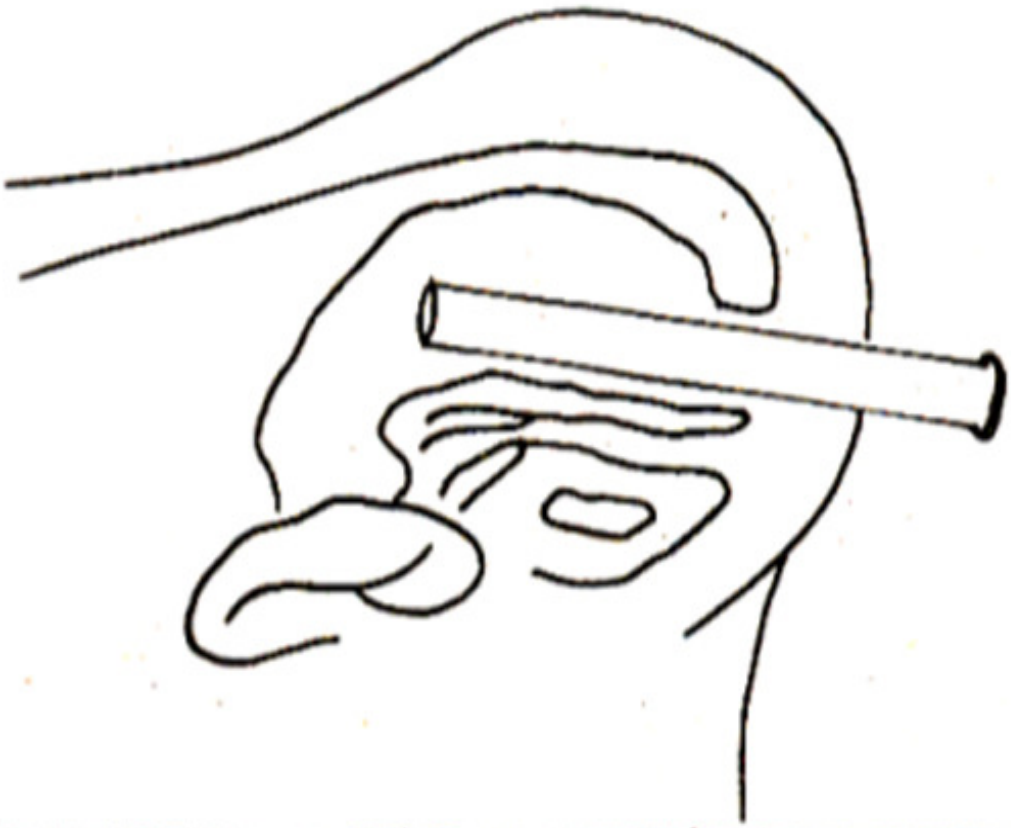

Figure 5. Obturator removed and scope is introduced with the lumen in view all the time.

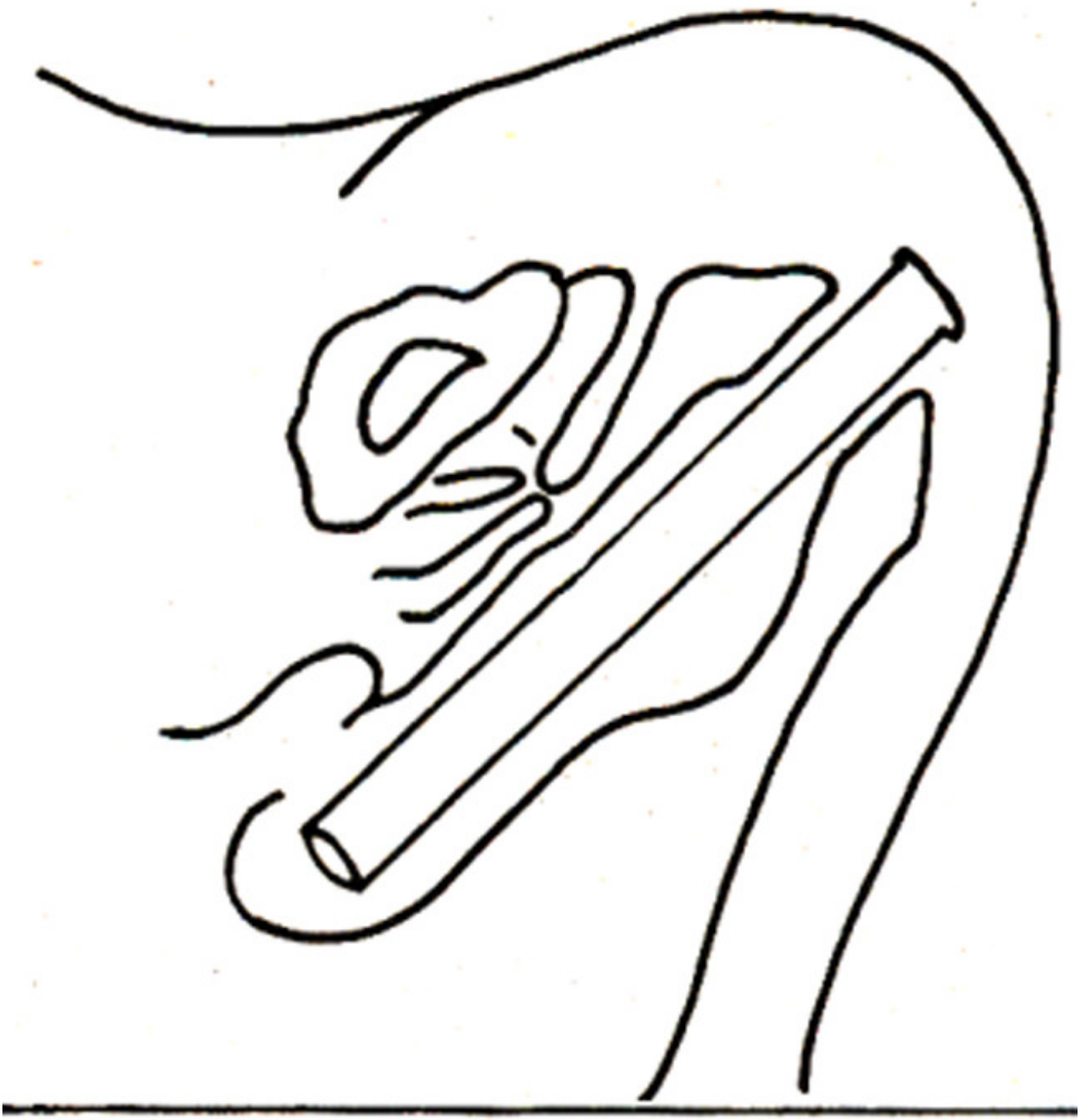

Figure 6. Scope inserted upto 25cms.

In majority of cases (>75%)4~5,6 scope can be inserted upto 25cm without much discomfort to the patient.[1] The lumen is carefully examined as the scope is withdrawn with a circumferential movement of the tip of the scope, while ironing out the valves of Houston. Lumen may need to be cleaned with swab or suctioning liquid stool as needed. Normal recto-sigmoid mucosa is pink with a delicate network of vessels visible. The first sign of oedema (inflammation) is blurring or loss of visibility of these vessels. Mucosal friability can be judged by touching mucosa with cotton swabs. Appearance of petechial spots is usually suggesfive of friability of mucosa. During examination neoplasms, inflammation, its severity and extent are noted and its distance from anal verge should be recorded.

Biopsy is best performed from posterior wall below the peritoneal reflection. It should be avoided from anterior wall and above 10cm. Bleeding from biopsy site can be avoided by holding tissue between the jaws of forceps before cutting instead of tearing it away. Even if bleeding occurs, it usually stops by applying pressure with a swab, with or without dilute epinephrine solution. Rarely bleeding points may need cauterization.

COMPLICATION

1. Perforation[2].
2. Bleeding (from biopsy or polypectomy site).
3. Infection (Bacteremia[3], specially in patients with endocarditis).
4. Arrhythmias (Transient[4]).
5. Explosion (specially when electro-surgical instruments are used).

CONTRAINDICATIONS

Absolute

1. Imperforate anus.

Relative

1. Uncooperative patient.
2. Cardio-pulmonary diseases.
3. Acute fulminating inflammatory disease.
4. Acute inflammatory disease of the anus.
5. Incessant lower gastrointestinal bleeding.
6. Endocarditis (As it may cause bacteremia).

However, if the patient can give an informed consent and is cooperative, there is hardly any contraindication to perform rigid procto-sigmoidoscopy.

ADVANTAGES

1. Sigmoidoscopy is a direct examination of the mucosa.
2. Diagnostic accuracy is greater.
3. Biopsies[5] and cytology can be taken.
4. It can be performed by any trained professional person. [6,7,8]
5. Morbidity and mortality is much less.

REFERENCES

1. NivatvOngs,S. and Fryd, D.S. Howfardoestheproctosigmoidoscope reach? A prospective study of thousand patients. N. Engi. J. Med., 1980; 30:380.
2. Jackman, R.J. Rigid Tube Proctosigmoidoscopy. In Berry LH, ed. GI. Panendoscopy. Springfield, (Thomas, 1974, p.439).
3. Lefrock, J.E., Ellis, C.A., Turchik, J.B. and Weinstein, L. Transient bacteremia associated with sigmoidoscopy. N. Engi. J. Med., 1973;289:467.
4. Fletcher, G.F., Earnest, D.L, Shuford, W.F., et al. Electrocardiographic changes during routine sigmoidoscopy. Arch. Intern. Med., 1968; 122:483.
5. Nivatvong. S. Technique of rectal biopsy. DiL Colon Rectum, 1981; 24:132.
6. Spencer, R.J> and Ready, R.L Utilization of nurse endoscopists for sigmoidoscopic examinations. Dis. ColonRectum, 1977;20:94.
7. Spencer, R.J. and Winkels, R.J. Treatment of diminutive mucosal lesions of the terminal colon by nurse endoscopists. Mayo Clin. Proc., 1978;53:391.