MATERIAL AND METHODS
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The present study was conducted in Maharani Laxmi Bai Medical College, Hospital, Jhansi on the patients who attended the surgical or medical out door patients departments and also on those who were admitted in the wards of this hospital. The patients included in the study had the common chief complaint of passage of blood per rectum besides the other symptoms. The study was conducted during the period from April, 1990 to April, 1991.

Every case was subjected to thorough and relevant history taking. A complete clinical examination was done with especial emphasis on the examination of abdomen. Patients were also subjected to investigations including total leucocyte count, differential leucocyte count, haemoglobin, urine examination. Stool examination was also done for the search of ova and cysts and also for some abnormal cells. Wherever it was possible a rectal or colonic biopsy was also taken.

Barium enema was done after sigmoidoscopy in few cases having symptoms suggestive of surgical disease and in patients who showed evidence of cancer or polyp on sigmoidoscopy. In those cases where diagnosis was not ascertained on sigmoidoscopy, they were also subjected to barium enema examinations.
In the cases where biopsy was taken barium enema was not done for ten days to avoid the chances of colonic perforation (Nicholls, 1977).

Sigmoidoscopy was performed without bowel preparation with laxative or by washouts. In few cases bowel preparation was done before the sigmoidoscopy. Indeed it is very desirable that the inspection should be carried out without any preparation. Purgation may make the examination impossible by filling the rectum with liquid faeces. Lavage may wash away a tell-tale flock of blood or mucous which may be the only evidence of disease higher up in the bowel and it causes a general hyperaemia, so that the normal vascular pattern cannot be seen. Sometimes it was not possible to get a complete view on the first occasion. In these cases the examination was repeated after defecation (Jones, 1968).

The following equipments were used and were every time conveniently laid on the trolley in the examination room.

1. A cough.
2. Small round bag.
3. Flat pillow.
4. Rubber or plastic sheet to cover the bed clothes.
5. Rubber gloves and disposable finger stalls.
6. Rigid sigmoidoscope with obturator, ballows, eye piece and light fitting.
7. Battery or transformer.
8. Biopsy forceps.
9. Lubricant (Xylocain hydrochloride 2% jelly).
10. Gauzes of appropriate size for cleaning inside of the sigmoidoscope. Brush can also be used for this purpose.
11. Tray.
12. Dry swabs.
13. Formaline vials for biopsies.

**TYPE OF THE INSTRUMENT**

Rigid sigmoidoscope (Llyod Davis type) having diameter of 1.5 cm, and length of 25 cm was used. With this small bore instrument discomfort to the patient was minimal and examination to 25 cm was possible without difficulty in most of the cases.

**POSITION OF THE PATIENT**

The following positions were used:

A. Left lateral (Simss).

B. Jack knife position.

C. Knee chest.
The left lateral position (sims position) was used most often during sigmoidoscopy. The four essential features of left lateral position are:

1. Long axis of patients trunk is at 45° to long axis of couch.
2. Feet level with far edge of the couch.
3. Buttocks raised on sand bag/pillow or folded towel.
4. Buttocks extending about 10 cm beyond the near edge of the couch.

The other two positions are less comfortable and may require special tables.

Sigmoidoscopy under anaesthesia is less safe than when patients is conscious and can co-operate. The order of examination was:

a. Inspection.
b. Palpation.
c. Sigmoidoscopy.

Prior to performing the procedure the indication and the purpose was explained. Also a digital examination of the rectum and anal canal were necessary to ensure that there were no lesions in the anus or the rectum, which may interfere with the sigmoidoscopy or get traumatised during the procedure.
PASSAGE OF THE INSTRUMENT

- Patient was kept in left lateral position as mentioned earlier.

- The instrument was lubricated well with 2% xylocain hydrochloride jelly.

- The instrument was passed gently with the tip towards the umbilicus of the patient. A fall in resistance indicates that the tip has entered the rectum.

- The obturator was now removed and the eye piece, light and ballows were attached to the instrument.

- The examination was always carried out under direct vision without blind advancement with just sufficient air insufflated by the ballows to keep the rectal walls apart.

- The instrument was angled backwards along the sacral curve, past the valves of Houston until the recto-sigmoid junction was reached (At about 15 cm from the anal verge).

The instrument was then advanced anteriorly and to the left into the sigmoid colon. Passage through recto-sigmoid junction may cause discomfort to the patient. Force should never be applied.
- The instrument was withdrawn slowly inspecting all parts of the bowel mucosa and taking care to examine behind folds where lesions such as polyps may be hidden.

  The normal mucosa is pale pink with visible submucosal vessels (vascular pattern). Friability of mucous folds was judged by applying gentle pressure with the sigmoidoscope. Beside this following things were also looked for, abnormal faeces, blood, pus, mucous, worms in the lumen, focal mucosal lesions like polyps, carcinoma, ulcers and diffusion lesions of the bowel like inflammation.

- Before the sigmoidoscope was withdrawn from the rectum the observation glass was removed to allow the air to escape.

- The total distance to which the sigmoidoscope was passed was recorded as well as the distance of any abnormality from the anal verge, its site, extent both proximal and circumferential were also recorded.

- If biopsy was taken, it was taken after the removal of the eye piece using large, cusp forceps. Biopsy site was properly inspected for the evidence of active bleeding.
Position for sigmoidoscopy: plain view of patient on examination couch, with buttocks projecting 10 cm beyond the edge on the examiner's side.

Sigmoidoscopy: The sequence of angles through which the instrument is advanced under direct vision and with the help of air insufflation.
Sigmoidoscope with Accessories