Rectal examination

Description

Rectal examination is an important part of the abdominal examination and genitourinary examination. It is important in examining for gastrointestinal disease but also for the detection of disease in other pelvic organs. It is an intimate physical examination which should be conducted correctly for detection of disease and for patient comfort. Findings should be accurately and correctly recorded.

Anatomical considerations[1]

- The rectum is the curved lower, terminal segment of large bowel. It is about 12 cm long and runs along the concavity of the sacrum.
    - The upper two thirds of the anterior rectum is covered by peritoneum but the posterior rectum is not:
        - In men, the anterior rectal peritoneum reflects on to the surface of the bladder base.
        - In women, the anterior rectal peritoneum forms the rectouterine pouch (the pouch of Douglas). The pouch of Douglas is filled with loops of bowel.
    - Anterior to the lower one third of the rectum lie different structures in men and women:
        - In men, anterior to the lower one third of the rectum lie the prostate, bladder base and seminal vesicles.
        - In women, anterior to the lower one third of the rectum lies the vagina. At the tip of the examining finger it may be possible to feel cervix and even a retroverted uterus.

- The anus is 3-4 cm long and joins the rectum to the perineum.
- The wall of the anus and anal canal is supported by powerful sphincter muscles. These muscles are made up of:

    - Voluntary external sphincter muscles.
    - Involuntary internal sphincter muscles.

    These muscles are essential in the mechanism of defecation and the maintainance of continence.

Indications for rectal examination[1]

This is an intimate and sometimes uncomfortable examination which is most often done when disease (usually gastrointestinal or genitourinary disease) is suspected or already identified. It may also be done as part of a screening examination when there is no suspicion or expectation of disease but the examination is performed as part of a thorough screening process. It is important in all cases to explain the reasons for the examination (see 'Preparing for the examination', below) and to obtain verbal consent. Examples of indications for examination include:

- Assessment of the prostate (particularly symptoms of outflow obstruction).
- When there has been rectal bleeding (prior to proctoscopy, sigmoidoscopy and colonoscopy).
- Constipation.
- Change of bowel habit.
- Problems with urinary or faecal continence.
- In exceptional circumstances, to detect uterus and cervix (when vaginal examination is not possible).

Preparing for the examination

- The reasons for performing the procedure should be explained to the patient. The procedure itself should be explained to the patient. A chaperone should be offered. Warn patients that:
    - The examination may be uncomfortable but should not be painful.
    - They may experience a feeling of rectal fullness and the desire to defecate.
- Equipment:
    - Suitable gloves
    - Lubricant
    - Lighting
    - Suitable soft tissues
- Position the patient comfortably, as below.

Details of the procedure

- Position the patient comfortably in the left lateral position. Flex hips and knees and position the buttocks at the edge of the couch.
- Gently part the buttocks to expose the anal verge and natal cleft.
- Inspection of the skin and anal margin with good light is important.
- Lubricate the examining index finger with suitable water-soluble gel and press the finger against the posterior anal margin (6 o'clock according to convention):
    - The finger should slip easily into the anal canal, and the finger tip is directed posteriorly following the sacral curve.
    - At this point, if appropriate, the anal tone can be checked by asking patients to squeeze the finger with their anal muscles.

- The finger is then moved through 180°, feeling the walls of the rectum. With the finger then rotated in the 12 o'clock position, helped usually by the examiner bending knees in a half crouched position and pronating the examining wrist, the anterior wall can be palpated. Rotation facilitates further examination of the opposing walls of the rectum. In men, the prostate gland will be felt anteriorly. In women, the cervix and a retroverted uterus may be felt with the tip of the finger. It is important to feel the walls of the rectum throughout the 360°. Small rectal wall lesions may be missed if this is not done carefully.
- Examination of the prostate gland (felt anteriorly):
    - Normal size is 3.5 cm wide, protruding about 1 cm into the lumen of the rectum.
    - Consistency: it is normally rubbery and firm with a smooth surface and a palpable sulcus between right and left lobes.
    - There should not be any tenderness.
    - There should be no nodularity.
    - Massage of the prostate gland may enable prostatic fluid to be examined at the urethral meatus.
- On removal of the examining finger check the tip of the glove (for stool, blood).

Examination findings

The findings are described by convention according to the clock face in the lithotomy position. 12 o'clock is anterior and 6 o'clock posterior.

External inspection may reveal

- Skin disease. For example, natal cleft dermatitis in seborrhoeic eczema.
- Skin tags.
- Pilonidal sinus.
- Genital warts.

- Anal fissures.
- Anal fistula.
- External haemorrhoids.
- Rectal prolapse.
- Skin discolouration with Crohn's disease.
- External thrombosed piles.

Internal examination may reveal

- Simple piles (but best examined at proctoscopy).
- Rectal carcinoma.
- Rectal polyps.
- Tenderness (with, for example, acute appendicitis).
- Diseases of the prostate gland.
- Malignant or inflammatory conditions of the peritoneum (felt anteriorly).

Rectal examination in children

This is a distressing examination for children and should be avoided. There are few absolute indications. When deemed essential, it may be appropriate to use the fifth rather than index finger.

Rectal examination in the elderly

Rectal examination is often required in elderly patients because symptoms and disease arise more often in elderly patients. The left lateral position may be uncomfortable for elderly patients. Time should be taken to achieve a comfortable position which allows adequate examination. Deafness may hamper explanations, but time should be taken to ensure that the procedure and the reasons for it are understood.

Further reading

- Nikendei C, Diefenbacher K, Kohl-Hackert N, et al; Digital rectal examination skills: first training experiences, the motives and attitudes of standardized patients. BMC Med Educ. 2015 Feb 1;15:7. doi: 10.1186/s12909-015-0292-7.

References

1. Joguet E, Robert R, Labat JJ, et al; Anatomical basis of digital rectal examination. Surg Radiol Anat. 2012 Jan;34(1):73-9. doi: 10.1007/s00276-011-0832-8. Epub 2011 Jun 4.

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