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Abstract

DIGITAL EXAMINATION

The use of the observer's eyes and forefinger with the initial chant of, “Now just turn over on your left side facing away from me and draw your knees up”, so realistically caricatured by O ’Grady (1963) is the first step in the “rectal” .

Whatever the selected patient position, ensure that you have a good light on the perianal area and provide an intermittent commentary for the patient’s benefit. Part the buttocks and make a thorough visual examination of the anal area for evidence of trauma, sore patches of skin, lichenification, ulcers, thread worms, blood or mucous, “piles” and skin tags, fissures and fistulae, pilonidal sinus, the highly contagious syphilitic condylomata (warts) or other signs of anal sexual contact, or a prolapse of piles, anal canal or uterus, and note whether the anus is withdrawn or patulous.

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THE RECTAL EXAMINATION

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DIGITAL EXAMINATION

The use of the observer's eyes and forefinger with the initial chant of, "Now just turn over on your left side facing away from me and draw your knees up", so realistically caricatured by O'Grady (1963) is the first step in the "rectal".

Whatever the selected patient position, ensure that you have a good light on the perianal area and provide an intermittent commentary for the patient's benefit. Part the buttocks and make a thorough visual examination of the anal area for evidence of trauma, sore patches of skin, lichenification, ulcers, thread worms, blood or mucous, "piles" and skin tags, fissures and fistulae, pilonidal sinus, the highly contagious syphilitic condylomata (warts) or other signs of anal sexual contact, or a prolapse of piles, anal canal or uterus, and note whether the anus is withdrawn or patulous.

There are two methods advocated for inserting the finger as pleasantly as possible — covered in a soft fine rubber finger stall or similar two or five-fingered glove. The better method is to ask the patient to bear down, i.e. to increase his intra-abdominal pressure and thus cause a mild protrusion of his anal ring. As he does so, gently apply your examining forefinger with the long axis of its cross section in line with his anterior (12 o'clock) — posterior (6 o'clock) anal plane and allow your finger to be gently sucked inward as he releases his intra-abdominal pressure. The result is that your finger will find itself in the rectum almost unbeknown to the patient.

The second method is to place the pulp of the distal phalanx of your examining forefinger flat against the anal ring and then gradually to pass it inwards, while at the same time slowly swinging the finger through a 90° angle until the tip points through the anal canal.

Whichever method you choose, never stab your finger at the anal opening because the suddenness will surprise your patient and the minor inevitable pain will produce your number one enemy — spasm.

You must now assess and make a decision upon:—

1) *The anal sphincter*

The integrity of this muscle mechanism is essential to man's well-being, for as Dr. Charles Mayo teaches:— "What other muscle in the human body has the exquisite ability to separate flatus from fluid from faeces!" You must objectively assess whether an increased tension of the anal sphincter is the result of your finger entry, through pain due to your inexperienced technique, or is maintained by an emotional overlay. If you suspect an emotional cause, pause and indulge in further conversation and explain your trouble to your patient and ask him to assist you by concentrating on a regular deep form of breathing and to relax as much as he can. Failure to achieve a reasonable relaxation of the sphincter at this stage may virtually nullify any further manoeuvres. A lax and toneless sphincter often associated with a patulous anus is an unusual condition and a cause such as rectal prolapse will usually be evident.

2) *The Anal Ring*
When all is settled, palpate the entire perianal ring between the pulps of the external thumb and internal forefinger, noting any lumps, cysts, foreign bodies, loculated pus, irregularities, pain-spots, etc. This practice is important and often passed over in the hurry to assess the rectum.

3) *The Temperature of the Rectum*
This is a very good indication of general body temperature. The Ancients, we are told, could detect early typhoid from a hyperpyrexic rectum.

4) *The Size of the Rectal Cavity*
The space in which your finger finds itself is very informative. It may be grossly ballooned as with a megacolon or from a longstanding condition of impacted faeces, it may represent the contracted rectum of longstanding ulcerative colitis, or the normal state in which the rectal walls are within easy reach of your fingertip.

5) *Faeces*
Some 50% of the time the rectum is empty, but if there are faeces present, decide whether they are hard (scybala), indentable, soft, or fluid and try to make your findings fit the facts.
For Example: A rectum full of hard, "impacted" faeces is liable to occur in the elderly, those clinically confined to bed, patients in the tropics, those who drink insufficient fluids, and those very ill or with high temperatures. Such obstructions must be manually removed before you can hope to achieve maximal information from your examination. A proctoscope is often useful for this purpose.

6) *The Rectal Mucosa*
The condition of the rectal mucosa is very informative. The normal state has a characteristic feel and should be mobile. If it is bound down at any point, such as over the prostate, suspect active disease (cancer) or the fibrotic aftermath of previous affliction (gonococcal).

7) *Suspicious Lesions Deep to the Rectal Wall*
If you have been using the lateral position, rotate the patient into the supine position, keeping your examining finger in situ and proceed with a further manoeuvre. Bimanual palpation, by applying pressure with your remaining free hand firmly and gradually in the suprapubic region while you ask the patient to bear down and relax his abdominal wall in gentle succession, will force the lower abdominal and pelvic contents towards your examining forefinger and will remove many lesions from your diagnostic list of possibilities.

Individually palpate the four points of the internal rectal compass while the patient strains down, questioning at each cardinal site as to the presence of increased discomfort, tenderness and pain.

The normal fallopian tubes, seminal vesicles and often the ovaries will not be palpable, but the bimanual technique will allow you to assess the characteristics of any suspicious lump in terms of site, size, shape, surface, consistency, edge, the fascial level in which it lies, any associated pain, any related loss of function or presence of abnormal lymph glands draining the area — after Sir James Paterson Ross (Ex P.R.C.S.).

Your examination concluded, withdraw your finger, wipe your gloved finger on a piece of filter paper or keep the glove itself with its small surface complement of faeces and intrarectal contents for brief macroscopic examination and simple tests such as hematest, for occult blood.

Explain to the patient that you are finished and compliment him on his co-operation. Thoroughly tidy the patient's anal area, apply a pleasant cheap powder (Johnson's Baby Powder) from a plastic blower bottle and cover his exposed hindparts with a concealing sheet. There is nothing more unpleasant to a patient than of knowing the anal area to be covered in jelly, of having experienced the sensation of having passed a motion, or not being properly tidied up and of having his posterior "to human view displayed".

THE SIGMOIDOSCOPE

Should the previous proceedings detect anything that worried you, proceed immediately with a sigmoidoscopy.

This instrument need not be above 25 cm. in length for the normal adult (a smaller one for children), to visualize the hemorrhoidal area (10 cms.), superior hemorrhoidal area

Fig. I. The Proctoscope and Sigmoidoscope.

(10-15 cm.), the recto-sigmoid junction (15-18 cm.) and beyond into the early sigmoid colon.

In this day and age the instrument should be equipped with an independent battery supply in the pistol-grip handle or with a rechargeable miniature power supply, similarly sited. The era of leads connected to dry batteries is past.

There are three methods of bringing light to bear on the distant subject. Light can be provided from a small bulb proximally (Lloyd-Davies model — good) or distally situated (Strauss model — not so good) within the tube of the instrument. Illumination can also be provided by use of the principle of internally reflecting light down the instrument's cylindrical walls of transparent plastic from a powerful light-source in the handle.

The latest development is that of the excellent disposable sigmoidoscope.

Such equipment contrasts very favourably with the cold metallic monstrosities that are equipped with a flickering light emanating from a loosely fitting bulb, supplied by an ancient battery through a temperamental rheostat that invariably "blows" the bulb at the crucial moment.

The instrument is laid-up on a trolley equipped with supporting proctoscope, swab-holding forceps, or better still, swabs on long sticks, biopsy forceps, a bowl of swabs some of which are submerged in a second bowl of body temperature 1/200 Chlorhexidine in saline solution, a powder squirter, and a pot of lubricating jelly.

The "jelly" should be water-soluble and supplied in a *wide-mouthed pot* so that the instrument or finger can be lubricated evenly in one fell movement.

Tubes of jelly such as "Lubafax" and "KY" are fiddly, expensive and are not satisfactory, while yellow paraffin or vaseline should be forbidden. Vaseline is thick and stiff at room temperatures which makes an even application to the forefinger difficult, reduces the sensitivity of your probing finger, is useless for instrument lubrication and can be sensed in the anal area by the patient for many hours after the examination is finished. The following recipe is for a cheap and effective form of lubricating jelly.

10 G — Powdered tragacanth — or similar thickener
30 ml. Glycerine

Warm the glycerine, mix in the tragacanth, boil until both are thoroughly mixed then

cool. Make the volume up to 300 ml. with a 1/1000 solution of Mercuric Dichloride.

The knee-elbow position has been mentioned as the most suitable position for sigmoidoscopy, at least from the operator's point of view, because the abdominal contents fall away from the instrument and minimal internal upset is caused to the patient.

The routine for the lateral position approach follows:—

Take the sigmoidoscope and obturator which have been cleaned with a long bottle brush and running hot water, removed from the sterilizer and allowed to cool in a big plastic dish. Rewarm in body temperature saline, if desired, but nothing much is gained by so doing because the instrument is either of thin metal which soon warms up or of plastic which does not feel cold. Lubricate the ends of the obturator and sigmoidoscope and insert them both under external visual control for 5 cm. Remove the obturator and apply the optical and air inflating attachments. With the left hand on the instrument and the left elbow on the patient's buttocks, apply your right eye to the proximal end of the instrument.

The position of the left hand and elbow is essential for ensuring that the instrument moves with the patient and does not independently wave around inside, a situation which is prone to cause pain and damage. The practice is akin to the firm placing of a thumb on the barrel of a hypodermic syringe and the fingers of the same hand around the arm of his patient, when the anaesthetist administers an antecubital I.V. injection. Advance the instrument only under visual control and use

Fig. II. A disposable Sigmoidoscope with power unit.

Fig. III. Equipment for the rectal examination.

just sufficient insufflation to distend the rectum, but not enough to cause discomfort to the patient or make loud backfiring flatus noises which cause him embarrassment. You will have to bypass an occasional faecal lump with minor movements, and will need to depress, lift and depress your end of the instrument as you proceed over the transverse rectal folds. As you progress, you may see the cause of the trouble and an estimation of its hardness can be assessed by prodding with the instrument. Continuing onwards you may then see, and feel, the iliac arterial pulsation transmitted through the rectal wall. For further progress you will require to move the proximal end and eyepiece posteriorly, with care as this may cause discomfort, in order to get around the sacral promontory, which will bring you to the region of the recto-sigmoid junction approximately 18 cm. up the alimentary canal *as measured from the anal ring*. Care must be taken in progressing further, some patients will permit the instrument with reasonable insufflation and judicious angling to pass beyond this point up to the full 25 cm., but about 25% will not submit no matter how devious is your approach and you must not force the issue. If you persist you run the grave risk of perforation with the rider of immediate reparative operation. It is far better to be satisfied with an 18 cm. traverse and see what you can discover with the aid of the radiologist beyond this point, putting the distance you actually achieved under observation on your x-ray request form along with the other relevant clinical information.

If during this process you wish to take a biopsy there are a few practical points to consider; but do not perform the biopsy yourself unless you know what you are doing. You may perforate the bowel wall when sampling above the recto-sigmoid junction or you may not bite deep enough and miss the all important basement membrane.

If the object is small, e.g. a polyp, it is worth removing the whole specimen. If, however, the lesion is a large ulcerated growth, the pathologist generally appreciates a full description with a snippet from the centre *and* one

from the margin as the centre may just disclose necrotic matter.

When you have procured the specimen with a minimum of trauma do not wipe it off the biopsy instrument with a piece of gauze and view it with a hunter's pride. Such a practice can cause a rapid dehydration of the peripheral cells with a resultant loss of many useful pathological diagnostic signs.

There is no need for hurry in these procedures, but quick and decisive movements are optimal if the specimen is being collected for histochemical enzyme or electron microscope studies. Normally it is quite sufficient to take your time and to put the end of the biopsy forceps straight into your plastic pot of Zenker's Formalin, shake off the specimen, label the container, and carry the specimen to the laboratory yourself or make sure a reliable and informed messenger has it in his charge. The specimen must be accompanied by a note designating your requests and supplying sensibly relevant information for the pathologist's benefit. Finally, and before doing anything else, describe your procedure and findings in a few well-chosen words in the patient's notes.

THE PROCTOSCOPE

This instrument has been left to the last because the indications for its use at the present time are becoming less numerous. It is accepted now that the digital, followed by the sigmoidoscope is the routine of choice. However, the proctoscope is still a very useful instrument for :

1) Reviewing lesions in the terminal 5 cm. of the rectum and for this a rotating grooved barrel instrument (Welch-Allyn) is a practical variant.
2) For the injection treatment of first and second degree " piles " using a tuberculin syringe (1 ml) and a 4" needle.
3) For the removal of excessive numbers of faecal lumps prior to a successful sigmoidoscopy.

The light for a proctoscope can also be supplied from power supplies in the pistol grip handle but in the interests of simplicity and expense, illumination from an angle-poise lamp, suitably held torch, or conveniently placed window is usually quite adequate. For future geographic anal reference purposes it is usual to use the clock terminology — that is, 12.00 is anterior between the legs and 6.00 is posterior. The classical position for hemorrhoids is that of 4 - 7 - 11 o'clock, a figure easily remembered by those who delight in " 4711 " Eau de Cologne.

The " take home message " is that a rectal examination is mandatory whenever there is :—

1) Bleeding from the rectum or evidence of melena.
2) Protrusion of mucosa from the rectum.
3) A change in the intestinal rhythm or content of the motions.
4) A " pile " (Hemorrhoid) present.
5) Pain in the lower abdomen and backache.
6) A discharge of pus or mucous P.R.
7) Pain in the ano-rectal area.

However, whatever the indication — digital rectal, proctological and sigmoidoscopic examination is neither burdensome nor difficult and for the patient, may be life-saving.

Finally, and before you leave the patient, explain to him what you have found and see that he is once again decorously dressed and comfortable. This last refinement is most essential because the majority of your patients will not have been so treated previously, and may mildly resent your assault — not appreciating the vital importance to you, the doctor, of such an examination. Handle the whole situation from start to finish with decorum, good maners and employ a matter-of-fact form of grace that will spare him any form of embarrassment. If you can accomplish this successfully you will find that the mental reaction within the patient will not be one of resentment but will be one of a grudging, but friendly, "Well this man is at least thorough."

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SIGMOIDOSCOPES

Welch-Allyn — Skaneateles Falls, N.Y., U.S.A.

" Coldlite " — Vann Bros., Ltd., 63 Weymouth St., London, England.

" Visiline " (disposable) — Smith, Kline Instrument Co., 1500 Spring Garden St., Philadelphia, Pa. 19101.

The first part of this article appeared in the last edition of Res Medica.