THE THINGS PATIENTS ENDURE DURING A BARIUM ENEMA

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INTRODUCTION

A barium enema is never a pleasant experience: at best it is uncomfortable, at worst it is a miserable ordeal. The physical discomforts are predictable and familiar to radiographers and radiologists. Every effort is made to obtain adequate diagnostic examinations at the least cost to the patient, but even in the best hands there is an unavoidable series of steps which must be followed. Barium enemas are particularly hard on the elderly who form a large part of diagnostic screening lists. This article describes current practice and the reasons for some of these inevitable discomforts. There is practical advice which may be helpful.

The object of a barium enema is to coat the entire mucosa of the colon which must be clean. Ideally, there should be no faecal residue in the lumen or adherent to the mucosa. Radiographs of barium coated faeces are worthless. They look like polyps and vice versa. This has a serious effect on film interpretation which, after all, is the purpose of the examination. It is a major difficulty in patients with iron-deficient anaemia suspected of having a colonic neoplasm.

BOWEL PREPARATION

The bowel is prepared the day before the enema. A low residue diet poses few problems but it is combined with a laxative which may be unpleasant. We use Picolax (Sodium Pico-Sulphate), a stimulant laxative which increases intestinal motility. This usually becomes effective within three hours and bowel movements continue frequently throughout the day and often into the night. It can be difficult to cope with this at work. Disturbed sleep is common. The abdomen is often bloated and patients complain of cramps. Peri-anal skin becomes tender and sometimes excoriated by traumatic wiping.

A very common complaint is of a thumping headache. This is usually avoidable by drinking copious fluid, but despite specific instructions to do so, many patients forget (or are unable) to drink sufficiently.

There is an alternative. Klean-Prep does not stimulate bowel motility and is an effective cleansing agent. It requires, however, at least four litres of solution to be drunk, sometimes more, occasionally less. The large volume induces nausea and sometimes vomiting. It does not avoid bloating or cramps but headache is much less frequent. Most people cannot drink four litres, least of all the elderly. It has not found favour for routine use but may be helpful in patients who have had previous difficulties with Picolax.

THE PROCEDURE

1. The Table

The examination takes place on a table. It is 36 inches high and patients must climb up on a step (10 x 16 inches, 9 inches off the floor) (Fig 1). There is no handrail and elderly patients are fearful. Poor eyesight makes it worse. Radiographers and nurses provide support (Fig. 2). Patients who cannot stand

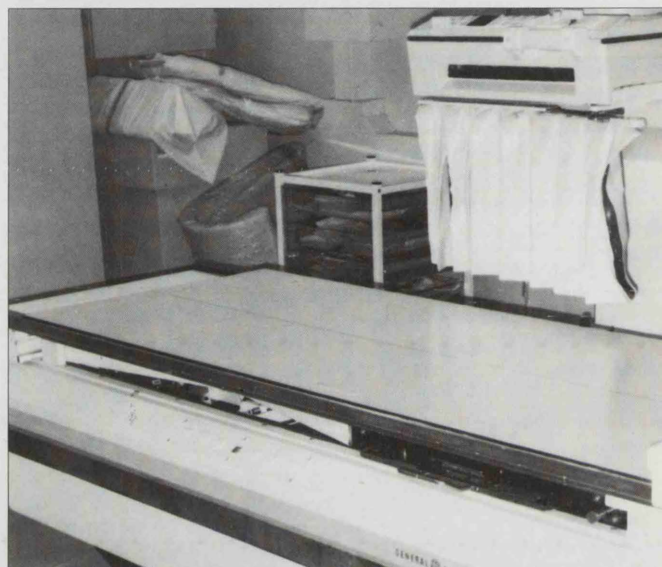

Figure 1 – The barium table, note the step.

Figure 2 – Climbing onto the table

unaided or who have joint or limb problems which prevent them climbing must be lifted. A transfer from a trolley is far easier, but it requires forward planning by the referring clinician, especially for outpatients. Prior notification is very welcome.

The table (Fig. 3) is hard, smooth and slippery. It is made of a substance like formica which can be quickly wiped clean and assists easy turning of the patient. There is no mattress; this would merely provide a sump for barium leaks (which are inevitable) and restricts turning movements. Thin patients get pains in their bones and joints, senile skin tears easily. Varicose ulcers and bed sores suffer painful knocks or are bathed in contaminated leakages. Watertight occlusive dressings and sheepskin joint protectors are recommended where appropriate.

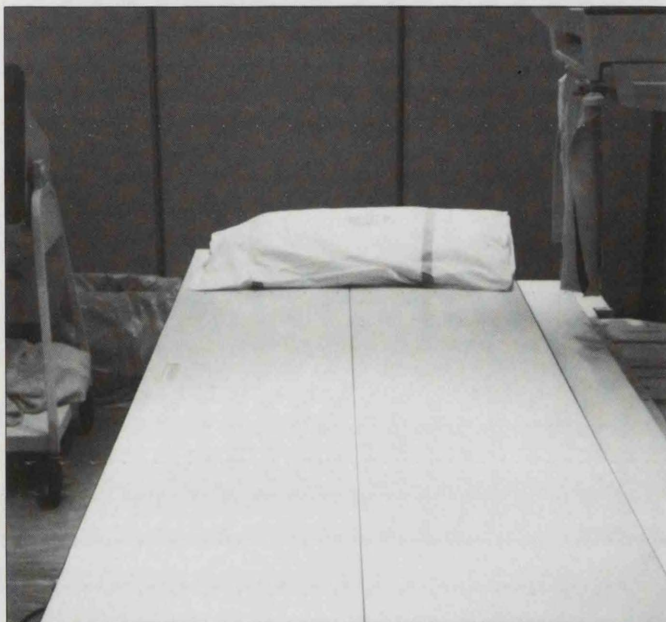

Figure 3 – The table surface

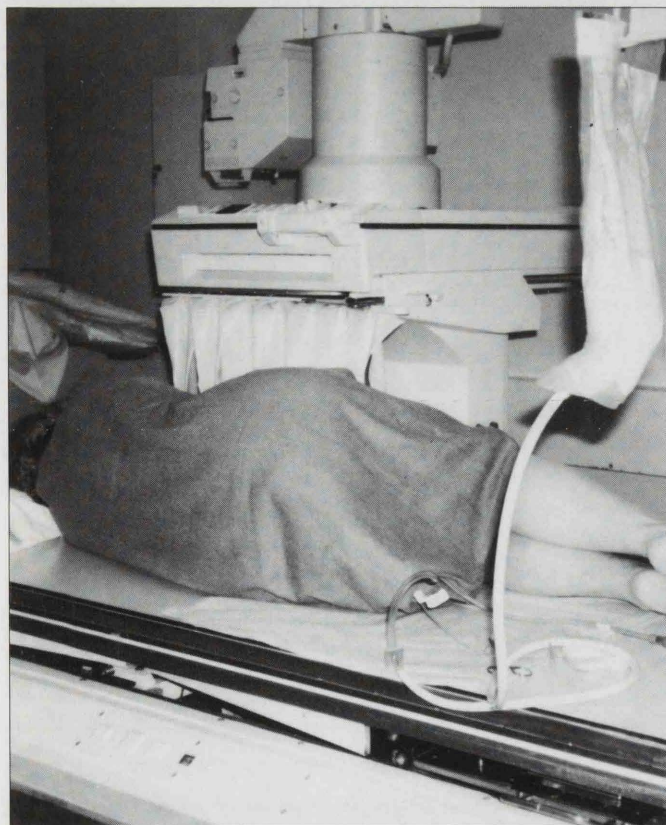

Figure 4 – The rectal tube in place

Once on the table, the patient lies in the left lateral position for placement of the rectal tube (Fig. 4). A competent sphincter is a godsend. This position hurts if there is osteoarthritis in the hip. Occasionally, hip prostheses are painful. Once the tube is in place, the room is darkened and the image intensifier passes over the patient (Fig. 5). Some find this claustrophobic and become restless. There is nothing to hold on to except the edge of the table (which moves). Hearing aids whistle when covered, and the background noise of the X-Ray machinery is considerable. The patients receive instructions from a radiologist at their back. Difficulties in communication make patients anxious or frustrated. A nurse or radiographer is often stationed within sight of the patient at the top end of the table for this reason.

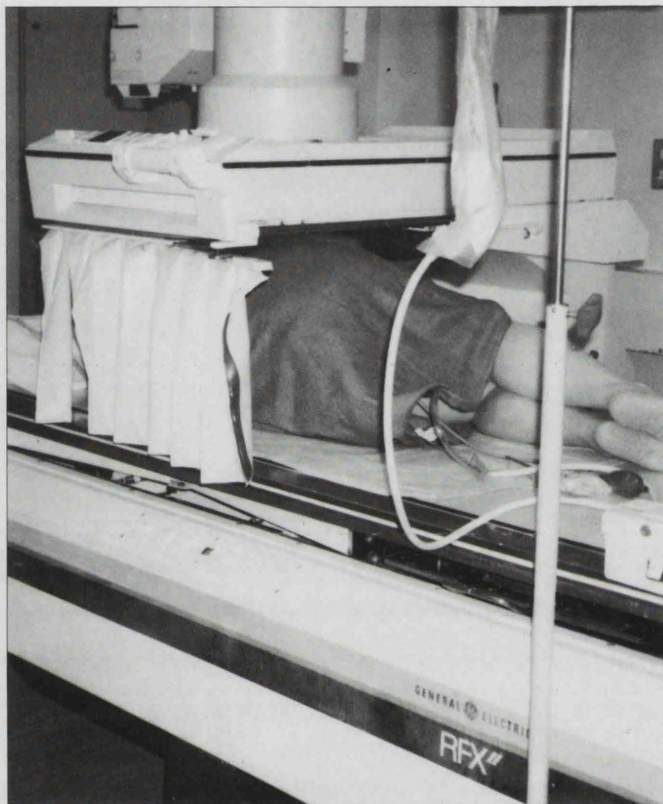

Figure 5 – The image intensifier over the patient

Lying flat can be wretched for patients with chronic airways disease, heart failure and disturbances of the inner ear. It is, however, not avoidable; barium does not flow uphill.

2. The Enema

The radiologist depends on gravity and the position of the patient to coat the colon. Barium is infused in the left lateral or prone position. Many patients have not lain prone for years and their necks hurt. The rectum fills quickly and may be uncomfortable in the normal bowel. Pain is predictable in proctitis and is very common in lesions of the sigmoid colon (e.g. carcinomas and diverticular masses). Once barium reaches the distal or mid-transverse colon, barium is drained off and air insufflation begins, partly to distend the bowel and partly to 'drive' the head of the column to the caecum. An intense desire to defaecate ensues. Patients become fearful of incontinence. Leakages whether real or imagined are embarrassing. Bowel colic may occur.

Patients then turn onto their right side (difficult with bad backs/shoulders/hips) for barium to coat the hepatic flexure and ascending colon. Often the latter does not fill and the table and patient are motored into an upright or semi-upright position (Fig. 6). Gravity then takes barium to the caecum. (It

Figure 6 – The semi-upright position

also takes spilled barium towards the feet. Modern barium preparations are mint scented to disguise any smells).

This change of posture may cause vertigo or lightheadedness. Postural hypotension is common despite slow table movement. Patients need to be able to stand upright. Returning to the horizontal position may repeat inner ear symptoms.

Once level, at least two decubitus films are common. Patients lie on each side in turn at the extreme edge of the table. All of these movements take place with the rectal tube in place. The tubing can become trapped or be pulled. Moving is hard work and can be distressing for patients with limited respiratory reserve or angina.

Patients who cannot move themselves must at least be compliant enough to be moved by others. Turning and rolling are not avoidable in barium enema examinations. A single contrast examination in the left lateral position is the last resort of the radiologist. Barium leakage is extremely common. The only hope is for input to exceed output. Wet barium soaks the gown and absorbent wadding. Patients become cold.

2. After the Enema

Once the fluid and air are drained, the rectal tube is removed. Patients must then sit up on the edge of the table, climb down and walk about ten metres to the toilet. Patients who leak when lying down usually leak when walking. Bowel evacuation is a relief but barium continues to be discharged for days. It is dense and does not readily leave the toilet trap. Everyone at home knows who has had a barium enema.

CONCLUSION

Few patients are unlucky enough to suffer more than a few of these discomforts and indignities. In general, they submit in silence and say little or nothing to the radiographers and still less to the radiologist. They accept that there is a job to be done. They are quick to realise when they are being treated kindly and most remarks about the procedure are made to the general practitioner or the staff in the out-patient clinics. Explanation and reassurance are made easier with an understanding of the minimum requirements and unavoidable features of barium enemas. Ideally, referring doctors should alert the X-Ray department to medical or surgical conditions or severely restricted mobility which are likely to interfere with the procedure. This is best done on the request card. In this way, the appointments clerk can allow extra time for a case or discuss the problems with a radiologist. Despite the difficulties, X-Ray staff find barium enema examinations very rewarding. The conditions they reveal are known to be important. It is satisfying to obtain diagnostic films whilst minimizing discomfort to the patient.