



## British Society of GI and Abdominal Radiology

### MR Enteroclysis

### Patient Information Leaflet

#### Introduction

This leaflet tells you about MR Enteroclysis, a test to look at your small bowel. It explains how the test is done, what to expect, and the risks involved. It is not meant to replace informed discussion between you and your doctor, but can act as a starting point for such a discussion.

#### What is MR enteroclysis?

MR enteroclysis is a way of looking inside your small bowel and abdomen. The small bowel is the portion of your intestine joining the stomach and duodenum to the large bowel.

An MRI (Magnetic Resonance Imaging) scanner is a short tunnel which is open at both ends. It uses magnets, radiowaves and a computer to produce images of the internal structure of the body. MRI does not use ionizing radiation (x-rays).

The scanner is operated by a Radiographer, who is a professional trained to carry out X-rays and other imaging procedures. The pictures are displayed on a computer workstation for examination by the Radiologist, who is a doctor specially trained to interpret the images and carry out more complex imaging examinations.

For MR enteroclysis, fluid is introduced directly into the small bowel via a tube passed through the nose and beyond the stomach. The fluid distends the small bowel so that it can be well seen on the MRI images.

#### Are there alternatives to MR enteroclysis?

There are alternative ways of looking at the small bowel:

*Small bowel barium studies* use barium contrast to fill or coat the small bowel and allow it to be seen on X-rays. The barium may either taken orally (*small bowel meal or follow through*) or introduced directly into the small bowel via a tube passed through the nose and beyond the stomach (*Small bowel enema or Barium enteroclysis*)

*Endoscopy* is a way of examining the large bowel using a thin tube with a camera on the end (endoscope) which is passed through the oesophagus and stomach and moved around the small bowel. The procedure is invasive and usually

requires sedation. Visualisation of the entire small bowel by endoscopy is a specialized technique and is not widely available. However, it does allow tissue to be removed for testing (biopsy) if needed.

*Video capsule endoscopy* uses a 'capsule camera' which is swallowed by the patient. This sends real time pictures as it passes through the small bowel to a recording device worn on the patient's waist. This technology is not widely available at the moment.

These examinations give a view of the small bowel only and, unlike MR Enteroclysis, do not give information about the other structures inside your abdomen.

*CT of the Small Bowel* uses a CT scanner to obtain cross-sectional images of the small bowel after it has been distended with a special solution taken orally (*CT Enterography*) or introduced directly into the small bowel via a tube passed through the nose and beyond the stomach (*CT enteroclysis*). Like MR Enteroclysis, this technique also provides information about the other structures inside your abdomen. However, CT of the small bowel uses ionizing radiation (X-rays).

## **What do I have to do before my MR enteroclysis?**

### **Bowel preparation.**

It is very important for the stomach and small bowel to be empty before the test is performed so that the small bowel can be clearly seen. You will be given a leaflet explaining this bowel preparation in more detail. The leaflet gives dietary instructions about what you should and should not eat or drink before your test. Sometimes a mild laxative is prescribed to clear the small bowel prior to the test. It is very important that you follow the instructions you are given.

### **Taking tablets and medicines**

You should continue to take all your normal medication unless you are diabetic taking insulin.

If you are diabetic using insulin, please contact the Radiology department for advice.

### **Females**

Females are asked to contact the Radiology department if you suspect that you may be pregnant or if the appointment is more than 10 days after the *start* of your last period. There is no evidence that MRI is unsafe in pregnancy, but as a precaution, we do not perform MRI on pregnant ladies unless it is essential. Part of this test uses radiation and there is a risk to the unborn baby if we were to do the X-rays when you are pregnant. When you arrive for your test, you will

be asked when your last period started. If it is more than 10 days earlier, your appointment may be postponed.

### **MRI Safety Questionnaire**

Please take time to read through and complete the attached MRI Safety questionnaire. If all of the answers are no then please bring the completed questionnaire to your appointment. If, however there are answers that are yes, then please return the completed questionnaire immediately to the Radiology department or telephone the MRI appointments desk for advice.

### **Where do I go when I arrive at the hospital?**

Please report to the reception desk in the Radiology department with your appointment letter. You will be shown to a private cubicle and asked to change into a clean gown. If you need help with changing or translation you may bring someone with you to help you. If you need an interpreter please tell us when you receive your appointment so that we can arrange this. Please do not wear items of jewellery as they may need to be removed prior to the scan.

### **Please let us know when you arrive for your test if you have any of the following:**

- Diabetes
- Kidney disease
- Prostate problems
- Angina
- Glaucoma

#### **or if**

- You have had a heart attack in the last six months
- You are waiting for heart surgery
- You are waiting for a coronary angioplasty
- You have any allergies

### **What happens during MR enteroclysis?**

- A member of the team will explain the test and answer any questions. Please let them know if you had any problems with your bowel preparation.
- A small tube will be passed through the nose into the stomach and manipulated under fluoroscopic (X-ray) guidance into the small bowel just beyond the stomach.
- You will have a small tube, called a cannula, inserted into one of the veins in your arm

- You will be asked to lie down on the moveable scanner table which is moved into the scanner.
- A receiving device will be placed around the part of your body being scanned.
- 1.5-2 litres of fluid will be introduced into the small bowel through the tube and scans will be performed to see whether the liquid has passed all the way through the small bowel.
- If it is not possible to pass a tube into your small bowel, we may continue with the MRI scan using oral fluid to fill the small bowel. You will be asked to drink about 1.5 -2 litres of liquid steadily over approximately 40 minutes prior to getting on the MRI scanner.
- Once the fluid has filled the entire small bowel a muscle relaxant will normally be injected through the cannula into the vein. This will stop the bowel from moving during the scan and give better images of your bowel. The muscle relaxant may make your eyesight blurred, but it soon wears off. However, you should not drive for 30 minutes after the injection.
- The MRI scan will then be performed and takes approximately 20-30 minutes to complete.
- You will be asked to remain still and hold your breath for short periods whilst the scans are taken.
- At certain times during the procedure, the MRI scanner will make a loud knocking noise caused by the magnets in the machine being turned on and off. You may be given earplugs or headphones to wear.
- You will be given an injection of intravenous contrast medium via the cannula during the scan.
- You will be alone in the MRI room during the scan but the Radiographer will be able to see, hear and speak with you at all times.

### **What happens after the test?**

The liquid you drink may cause some short lived diarrhoea, so you may wish to spend a short time in the department near to a toilet before you go home. You may eat and drink as normal as soon as the examination is finished. Normal activities may normally be resumed immediately after the scan.

### **Are there any risks?**

MR enteroclysis is generally regarded as a very safe test. Problems can occur, but they are rare. Problems which might occur are similar to those which can happen with other methods of examining the large bowel.

These include:

- Transient discomfort in the nose or throat as the nasojejunal tube is being introduced into the small bowel.
- Nausea or Abdominal discomfort
- The liquid you drink may cause some short-lived diarrhoea

- Reaction to the injected contrast  
A Radiologist or other clinician will be available to assist if you experience any symptoms of an allergic reaction. Such reactions are usually mild and easily controlled by medication.

The placement of the tube in the bowel for MR Enteroclysis involves the use of X-rays. There are strict guidelines in place for the use of x-rays in diagnosing medical conditions so this test can only be performed at the request of a Doctor. The amount of radiation used is small. However, women who are or might be pregnant must inform a member of staff in advance.

### **How do I get my results?**

A specialist Radiologist will review the images from your MR enteroclysis and send a report to your doctor. Your GP or hospital Consultant who referred you for the test will see you to discuss the results.

### **Any further questions?**

We will do our best to make your visit as comfortable and stress free as possible. If you have any further questions, or suggestions for us, please let us know.

If you would prefer information and advice in another language, please contact the Radiology department.

### **Further Information**

For general information about Radiology departments, visit The Royal College of Radiologists' website: [www.goingfora.com](http://www.goingfora.com)

For health advice or information you can call NHS Direct on 0845 4647 or visit the website: [www.nhsdirect.nhs.uk](http://www.nhsdirect.nhs.uk)

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