**Small bowel malrotation in adults – Adequacy of duodenojejunal junction visualisation on adult barium meal studies**

**Descriptor:**

Audit to determine the adequacy of duodenojejunal junction visualisation on barium meal studies to ensure the diagnosis of small bowel malrotation is not overlooked.

**Background:**

The diagnosis of small bowel malrotation within the adult population and its clinical significance has been a source of debate within the literature for many years. However, a number of recent studies have emphasised the importance of diagnosing and referring patients with a radiological diagnosis of small bowel malrotation for surgical follow-up. Small bowel malrotation is a congenital defect which may be detected as an incidental finding on barium meal imaging. The position of duodenojejunal junction should be adequately visualised on imaging to ensure accurate diagnosis of small bowel malrotation.

## The Cycle

**The standard:**

1. The duodenojejunal junction should be visualised on barium meal imaging

2. Patients with radiologically diagnosed small bowel malrotation should be referred to the surgical team for further assessment

**Target:**

1. The duodenojejunal junction should be visualised on 100% of barium meal studies

2. 100% of patients with radiologically diagnosed small bowel malrotation should be referred to the surgical team for further assessment

## Assess local practice

**Indicators:**

1. Percentage of barium meal studies where the duodenojejunal junction has been adequately visualised

2. Percentage of patients with radiologically diagnosed small bowel malrotation referred to the surgical team for further assessment

**Data items to be collected:**

1. Hospital based ‘RIS system’ utilised to identify 100 sequential barium meal studies. Images to be reviewed by two radiologists to determine whether the duodenojejunal junction was adequately visualized
2. Number of small bowel malrotation identified on barium meal and number of these appropriately referred to the surgical team for further assessment.
3. Outcome of cases of small bowel malrotation identified on barium meal and referred to the surgical team
4. If small bowel malrotation is present on barium meal, has there been any abdominal cross-sectional imaging (CT/MRI) either prior to of afterwards that correlates with the barium findings.

**Suggested number:**

100 sequential barium meal studies reviewed

**Suggestions for change if target not met:**

1. Presentation of results at departmental radiology meeting highlighting areas for improvement

2. Re-audit following education of radiology staff

**Resources:**

1. Radiology Information System (RIS)

2. Surgical Discharge diagnosis database access

**References:**

1. Pickhardt PJ, Bhalla S. Intestinal malrotation in adolescents and adults: spectrum of clinical and imaging features. Am J roengenol. 2002; 179(6): 1429-35.
2. Malek MM, Burd RS. The optimal management of malrotation diagnosed after infancy: a decision analysis. Am J Surg. 2006; 191(1): 45-51.
3. Kapfer SA1, Rappold JF. Intestinal malrotation – not just the pediatric surgeons problem. J Am Coll Surg. 2004; 199(4): 628-35.
4. Seymour NE1, Andersen DK. Laparoscopic treatment of intestinal malrotation in adults. JSLS. 2005; 9(3): 298-301.

**Editor's comments:**

This is a rare diagnosis but an important part of a standard barium meal technique. The audit will at least determine whether technique is appropriate and presentation of the results remind the audience of the need to look at the position of the duodenojejunal junction.

**Submitted by:**

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