

# A case report concerning the importance of the patients' symptoms and clinical findings in the management of patients

Bodil Ohlsson

Department of Clinical Sciences,  
Division of Gastroenterology and  
Hepatology, Malmö University Hospital,  
Lund University, Lund, Sweden

## Abstract

The gastrointestinal tract has always been difficult to visualize in its entire length. New technology such as magnetic resonance imaging enterography, computed tomography enterography, single- and double-balloon enteroscopy, and video capsule enteroscopy have improved the possibilities for visualizing mucosal changes and pathology in the small intestine. We describe here a case of a patient with gastrointestinal signs and symptoms suggesting recurrent intestinal obstruction over a period of several years, who had mostly normal morphology on endoscopic examination.

Nonetheless, after some delay, the patient underwent explorative surgery because of his accelerating symptoms. Abdominal exploration revealed a Meckel's diverticulum, which had led to inflammatory adhesions of the small intestine with a sharp bend and proximal intestinal dilation. After the operation the patient's health was restored. We concluded that in certain situations the clinician should rely on the patients' symptoms and clinical findings more than on technological examinations and the clinical picture should guide clinicians' interventions, even though we live in a high-technique era.

## Introduction

It has always been a difficult task to examine the entire gastrointestinal tract in both its morphology and its function. The newly developed techniques of video capsule enteroscopy (VCE), Given Diagnostic Imaging System® (Yoqneam, Israel) technique, single- and double-balloon enteroscopy (SBE and DBE) have been valuable complements to other more established methods, such as magnetic resonance imaging enterography (MRE) and computed tomography enterography (CTE).<sup>1,2</sup> However, the risk in the health care system today is that we use too many of our advanced technology methods instead of listening to and examining the patient. Negative findings by a

sensitive method may obscure the picture and delay the treatment of the patient. Here we describe a case in which the accurate diagnosis and management was delayed because of negative endoscopic findings. Eventually an operation was performed and led to a correct diagnosis and treatment.

## Case Report

A 37-year-old man was admitted to the Department of Gastroenterology because of recurrent attacks of intestinal obstruction. Ever since the age of five years, he had had abdominal pain and occasional diarrhoea. In addition, once or twice yearly he had attacks of intestinal obstruction. During the last year prior to the referral, the attacks recurred more frequently and the abdominal pain persisted for several days. He had visited the emergency room several times over recent years because of the recurrent intense abdominal pain and he had lost three to four kilograms of weight.

Examination with MRE showed a dilated small intestine with a short stenotic area at the level of the navel, and the distal ileum was collapsed. The last 50 cm of ileum had a thickened and asymmetrical intestinal wall. Crohn's disease was suspected. The patient had a previous traumatic experience of colonoscopy, therefore this examination was not performed. Instead, a full dosage of budesonid (Entocort®, AstraZeneca, Gothenburg, Sweden) was administered, aimed to release the intestinal obstruction. However, the treatment had not led to any improvement when re-evaluated after four weeks. Surgery and resection of the suspected stenotic area was discussed as the calprotectin level was <20 and medical treatment was without effect. At that time the clinicians still hesitated to perform surgery on the patient before all available imaging techniques of the small intestine were used. Further examination with DBE through the colon and up to one meter into the ileum revealed a normal mucosa and normal histopathology. This was followed by a VCE, which showed normal transit time with no passage obstruction, but one ulceration in the middle of the ileum and dispersed minimal erosions in the distal ileum. The mucosal pathologies were suspected to be artificial based on the results of the DBE with mucosal biopsies some days earlier. Surgery was not recommended, and waiting for a while longer with a further VCE after some months was suggested.

Because of aggravating symptoms with abdominal pain and vomiting, the patient was explored finally with a diagnostic laparoscopy. This occurred more than one year after the pathological MRE and the episodes of intestinal obstruction. The operation showed a

Correspondence: Bodil Ohlsson, Entrance 35, 205 02 Malmö, Sweden.  
E-mail: bodil.ohlsson@med.lu.se

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Meckel's diverticulum with inflammatory adhesions between different segments of the small intestine and a sharp bend with proximal intestinal dilation. The diverticulum was resected and the adhesions dissolved. These procedures cured the patient who has experienced no further abdominal symptoms.

## Discussion

This case illustrates the risk of trusting sensitive methods instead of practicing basic clinical bed-side diagnostics. Based on the findings of a positive MRE for a stenotic process and the patient's severe symptoms, surgery should have been performed at once instead of extensive and expensive examinations and medical treatment, which only delayed the cure of the patient.

Video capsule enteroscopy and balloon enteroscopy are used increasingly to detect small intestinal pathology. However, accumulating experience with VCE, combined with the development and improvement of new alternative imaging techniques; for example, MRE and CTE, has highlighted potential limitations in capsule technology. Some studies showed that VCE is the most sensitive method for examination of the small intestinal mucosa,<sup>1</sup> whereas other studies failed to show that VCE is more sensitive than MRE and CTE.<sup>3</sup>

Furthermore, the higher the sensitivity the less is the specificity. The risk with the very high sensitivity for mucosal changes is that unspecific, not clinically relevant changes could be found.<sup>3</sup> At the same time, there is increasing evidence that significant tumor lesions may be missed, even under optimal conditions, especially within the proximal

small intestine<sup>4</sup> and when there are solitary lesions or masses within an otherwise normal small intestine.<sup>5</sup>

The VCE only shows the mucosa, not an obstruction, dilation, or the thickness of the intestinal wall. Balloon enteroscopy, MRE, and CTE have the potential to avoid some of these disadvantages of VCE.<sup>4,6</sup> Comparisons between VCE and DBE emphasize the advantages of DBE.<sup>4,7</sup> However, SBE and DBE require considerable expertise and are significantly more invasive than VCE. If the diagnosis is uncertain, but the patient is very sick, an exploratory laparotomy combined with intraoperative enteroscopy may be preferable.

Negative SBE or DBE and VCE sometimes lead to postponing treatment for the patient. Although these examinations remain an invaluable tool for the detection of small intestinal pathology, our case highlights the continuing important roles of complementary new radiological imaging techniques, such as MRE and CTE, and of the evaluation of the small

intestinal wall. In addition, examination and clinical diagnostic findings should be given priority over radiological and technological findings in certain situations. There is a risk today that we operate on too few patients and administer potentially harmful drugs instead of using safe surgical methods.

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