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#### **Review Article**

## Obstructed defecation syndrome



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#### ABSTRACT

Obstructed defecation syndrome (ODS) is a functional disorder leading to the sensing of outlet obstruction in the absence of any pathological findings. In this article, we also provide the etiology of acquired constipation. Constipation is a very common presentation by the patients of a practicing surgeon. Any constipation that defies the existing understanding merits consideration for its evaluation for ODS. Constipation can be of primary or secondary variety. After clinically excluding the usual causes of constipation and ruling out colonic motility disorders, specialised investigations like dynamic defecography help in further management of ODS.

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#### 1. Introduction

Obstructed defecation syndrome (ODS) is a functional disorder leading to defecatory dysfunction that leads to sensing of outlet obstruction in the absence of any pathological findings. Constipation is a very common presentation by the patients of a practicing surgeon. Any constipation that defies the existing understanding merits consideration for its evaluation for ODS. The constipation can be of primary or secondary variety.

Three pathophysiological subtypes of primary constipation have been described:

- 1. Constipation predominant irritable bowel syndrome (C-IBS).
- 2. Slow transit constipation.
- 3. Dys-synergic defecation.

Before proceeding to evaluate primary constipation, a thorough history taking and examination must be undertaken for all the known causes of secondary constipation.

#### 2. Approach to rule out secondary constipation

Secondary constipation may be due to several factors in isolation or combination. These may be lifestyle and

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Table 1 – Etiology of acquired constipation.						
Etiology of acquired constipation						
Lifestyle-related causes	Infectious etiology	Anatomic abnormalities	Functional abnormalities	Physiologic and other abnormalities		
Diet Pace of life Medications Weight loss/anorexia/ laxative abuse	Trypanosomiasis	Neoplasms Strictures Adhesions Volvulus Rectal prolapse – Full thickness, Internal Rectocele	Nonrelaxaing puborectalis Slow transit colonic constipation Megacolon/megarectum Descending perineum	Diabetes mellitus Hypothyroidism Hypopituitarism Porphyria CNS trauma Parkinson's disease Brain and CNS tumors		

diet-related factors, medical drug intake-related, behavioral or psychiatric factors, metabolic or endocrinal disturbances, neurological, or other structural pathologies. A problem-specific history taking and physical examination should be performed in such patients (level of evidence IV: Grade of recommendation B). These should proceed as shown in Table 1. The drug intake history should include various drugs as shown in Table 2.

## 3. Ruling out constipation predominant irritable bowel syndrome (C-IBS)

Irritable bowel syndrome can be constipation-predominant, diarrhea-predominant and alternating diarrhea-constipation presentation. Irritable bowel syndrome needs to be excluded as per Rome II criteria. Rome II criteria define irritable bowel syndrome as symptoms in absence of any identifiable structural or metabolic disturbances to explain the symptoms. The symptoms are abdominal discomfort/pain of more than 12 weeks duration consecutively or nonconsecutively in the last 1 year along with any two of the following three features.

- 1. Symptoms are relieved by defecation/passage of flatus.
- Onset of symptoms is associated with a change of stool frequency.
- Onset of symptoms is associated with change in stool form in absence of laxative usage.

#### 3.1. Ruling out dys-synergic defecation

In normal defecation there is increase in intrarectal pressure (IRP) with simultaneous fall in intra-anal pressure. This recto-anal pressure synergy leads to a propulsive rectoanal pressure gradient (RAG). The pressure is estimated by rectal manometry.

There are four types of dys-synergic defecation as given in Table 3.

#### 3.2. Ruling out slow transit constipation

Slow transit constipation needs specialized investigation. It can be suspected on having a clinical history of absence of normal bowel urge that is experienced on either getting up in the morning or after having a meal. If it is suspected, further evaluation should be done. Assessment of the speed at which

stool moves through the colon provides objective measurement of colonic transit. Colon transit time can be measured by three methods.

- 1. Radio-opaque marker test: A single capsule with 24 plastic markers is given for patient to ingest followed by a plain abdominal radiograph on day 6 (120 hrs' later). Retention of atleast 20% markers or more than six markers after 120 hrs is indicative of slow transit constipation, as shown in Fig. 1.
- Radioisotope scintigraphy provides non-invasive quantitative evaluation of total and region colonic transit. Isotope used is Indium III or 99Tc and is ingested as a capsule that dissolves in terminal ileum. Gamma images are obtained at specific time intervals to give an objective transit data.
- 3. Wireless motility capsule (WMC) provides a noninvasive method of measuring gastric, small bowel and colonic transit times. In addition to transit time, it provides the pH changes and intraluminal pressure changes as it courses through the gut. It is very sensitive and specific modality but

Table 2 – Medicines that can cause constipation.				
Amiodarone	Carboplatin			
Antacids (e.g. aluminum)	Cholestyramine			
Anticholinergics	Erythropoietin			
Anticonvulsants	Filgrastin			
	{granulocyte			
	colony-stimulating			
	factor (G-CSR)}			
Antidepressants	Iron			
Calcium channel blockers	Lovastin			
Diuretics	Mesalamine			
Ganglionic blockers	Narcotics/opiates			
Antiparkinsonians	Pravachol			
Bismuth	Sandostatin			
Bromocriptine	Valproic acid			
Bulk laxatives with	Vincristine			
inadequate hydration				

Table 3 – Types of dys-synergic defecation.					
Type	IRP	IAP	RAG		
I	Rise (+IRP)	Rise (+IAP)	0		
II	No Rise (=IRP)	Rise (+IAP)	-ve		
III	Rise (+IRP)	No Fall or <20% fall	0  or  -ve		
IV	No Rise (=IRP)	Fall	0  or  -ve		
Normal	Rise (+IRP)	Fall (—IRP)	+ve		

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