

Severe obstipation with all 24 markers accounted for in colon transit time examination

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Section: Abdominal imaging

Area of Interest: Abdomen Colon Gastrointestinal tract

Procedure: Contrast agent-other

Special Focus: Foreign bodies Case Type: Clinical Cases

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Patient: 56 years, female

Clinical History:

Patient with a history of paranoid schizophrenia and treatment with psychotropics, alcohol abuse and lately also immobilisation.

Developed problems with increased abdominal size, increased weight, diffuse abdominal pain and some fillings in the left fossa.

Imaging Findings:

Colon transit time: Radiography of the abdomen 5 days after ingestion of a capsule containing 24 radioopaque markers shows all 24 markers still present in the gastrointestinal tract:

3 markers in small intestine segments.

18 markers in colon ascendens.

1 marker in colon transversus.

2 markers in colon sigmoideum.

Discussion:

Constipation is a known side effect of psychotropics that possess high affinity for muscarinic cholinergic receptors. In severe cases, constipation progresses to ileus and bowel ischaemia, with multiple fatalities related to sepsis and perforation described in the literature, primarily among patients with schizophrenia. [1]

Additionally patient with psychiatric illnesses often use morphine which can lead to opioid-induced bowel dysfunction through the peripheral opioid receptor system. [2]

The procedure is the administration of a single capsule containing 24 4.5 mm radioopaque markers followed by a plain abdominal radiography 5 days after ingestion. More than 5 markers visible has been identified as diagnostic of slow colon transit time. [3, 4]

The diagnosis can help the clinicians in adjusting the laxative treatment and considering opioid receptor antagonists if relevant. [5]

Differential Diagnosis List: Severe obstipation, probably attributet to regular intake of psychotropics., Malignancy,

Ascites

Final Diagnosis: Severe obstipation, probably attributed to regular intake of psychotropics.

References:

Nielsen J and Meyer JM (2012) Risk factors for ileus in patients with schizophrenia. *Schizophr Bull* 38(3):359-8 (PMID: [21112965](#))

Rachinger-Adam B, Conzen P and Azad SC (2011) Pharmacology of peripheral opioid receptors. *Curr Opin Anaesthesiol* 24(4):408-13 (PMID: [21659869](#))

Clark K and Currow DC (2013) A pilot study to assess the feasibility of measuring the prevalence of slow colon transit or evacuation disorder in palliative care. *J Palliat Med* 16(5):542-5 (PMID: [23621706](#))

Bassotti G, Imbimbo BP, Betti C, Dozzini G and Morelli A (1992) Impaired colonic motor response to eating in patients with slow-transit constipation. *Am J Gastroenterol* 87(4):504-8 (PMID: [1553939](#))

Rachinger-Adam B, Conzen P and Azad SC (2011) Pharmacology of peripheral opioid receptors. *Curr Opin Anaesthesiol* 24(4):408-13 (PMID: [21659869](#))

Figure 1

a



Description: Radiography of the abdomen 5 days after ingestion of 24 radioopaque markers. Upper abdomen. **Origin:** Department of Radiology, Hvidovre University Hospital, Copenhagen, Denmark

b



Description: Radiography of the abdomen 5 days after ingestion of 24 radioopaque markers. Lower abdomen. **Origin:** Department of Radiology, Hvidovre University Hospital, Copenhagen, Denmark