

## CONSTIPATION IN PALLIATIVE CARE

Constipation is much more common in people who are terminally ill than in the general population. It is currently defined as the passage of small, hard faeces infrequently and with difficulty. The Rome Criteria is often used as the research definition, where the patient is constipated when they experience at least three months of two or more of the following: straining during more than 25% of the defaecations, sensation of anorectal obstruction during more than 25% of the defaecations, lumpy or hard stools in more than 25% of the defaecations, and less than three bowel motions per week. Although this provides a good list of the symptoms to watch for, it is important to diagnose and treat constipation in the clinical context, rather than waiting to satisfy the criteria.

Constipation is usually multifactorial in palliative care. Common co-existing causes include opioids, inadequate food intake, dehydration, inactivity, weakness, anticholinergics, antacids, diuretics, antihypertensives, direct pressure and/or nerve damage from abdominal malignancies, hypercalcaemia, diabetes, hypothyroidism, hypokalemia, and many others. Although opioid analgesia is probably the most constipating factor, more than half of the elderly population with progressive illness not taking opioids will still need laxatives.

Detailed assessments, including abdominal and rectal examinations are crucial in diagnosing and managing constipation. In addition to the symptoms listed in the first paragraph, nausea and abdominal pain should also trigger inquiry into bowel habits. Faecal impaction may present as overflow diarrhoea with incontinence, particularly in elderly patients. Intra-abdominal neoplasms and previous abdominal surgeries may cause varying degrees of intestinal obstruction, causing more nausea, vomiting and colicky pain. Abdominal palpation and auscultation can aid in diagnosing intestinal obstruction and other abdominal complications. Rectal examination provides additional vital information. Lax anal tone hints underlying abnormal colonic motility, and possibly underlying neurological damage. Overt obstructive pathologies such as tumours, rectocele, infections or stenosis can be found. Presence of blood, melaena or mucous aids in diagnosing other gastrointestinal complications. Faecal impaction can often be felt, while the consistency of the stool can guide decisions in using stool softeners. Rectal examination is contraindicated in patients with neutropenia and/or thrombocytopenia. Further investigations are only indicated if there are suspected underlying complications.

As part of ongoing assessment, the Bristol Stool Form Scale is the most widely used measurement of stool consistency, which is extremely helpful when meticulously documented. It can be used by patients and carers in both inpatient and outpatient settings. Close monitoring of stooling frequency and consistency provides guidance to ongoing titration of laxatives that is usually required.

Non-pharmacological methods should be maximised where possible, including good overall symptom management, adequate oral food and fluid intake, maximising physical activities and ensuring privacy and comfort for defaecation. Most patients with advanced disease will still require laxatives. Their mechanism of actions are generally categorised into stimulating and/or softening.

Laxatives that have stimulating actions act on the myenteric plexus to stimulate intestinal contraction. Agents with predominantly stimulating action include senna, bisacodyl, sodium picosulphate and dantron. They can potentially increase colicky pain, especially in presence of any degree of mechanical obstruction. Dantron in particular should be used cautiously as it can cause irritation to the skin in contact with faeces. It also causes red discolouration of urine.

Laxatives that have softening actions work via different mechanisms. Osmotic agents increase the water content within the gut lumen. Examples include lactulose, magnesium hydroxide and magnesium sulphate. Lactulose is broken down by colonic flora and can give rise to flatulence in 20% of patients. Surfactants soften the stool by increase water penetration into them. Examples include docusate and poloxamer. Macrogols work by causing water to be unabsorbable by the gut, therefore require to be taken with large volumes of water. An example is polyethylene glycol, which comes in powder form and needs to be taken dissolved in more than 100mL of water. Some patients may find this difficult. Bulk-forming agents such as psyllium require even more water to be effective, needing more than 200mL. They can also form a viscous mass and worsen malignant bowel obstruction. Therefore they are generally not beneficial in palliative care patients.

Single agent stimulant can be effective in the palliative care population, however most current guidelines suggest utilising a combination of stimulating and softening laxatives when starting oral regimen. This is to theoretically reduce dose of stimulating laxatives required, therefore reducing the incidence of side effects such as colic. If faecal impaction is present or suspected on assessment, oral laxatives alone are often inadequate and rectal interventions are generally indicated. Any rectal intervention can induce ano-colic reflex and promote defaecation. Stimulant suppositories such as bisacodyl add to the effect by increasing peristalsis. Osmotic agents and surfactants are common rectal softening agents, working in similar mechanisms as described above as oral agents in the same class. Examples of osmotic agents include glycerol suppositories and phosphate enemas. Docusate is also available as an enema and works as a surfactant. Lubricating enemas such as arachis oil are also used to allow easier stool passage. People with peanut allergy may react to this. Manual dis-impaction is the last resort and patient may need sedation through the uncomfortable procedure. With patients with late stage cancers it is not uncommon for them to require ongoing rectal therapies to maintain satisfactory bowel habits. All rectal interventions are contraindicated in patients with neutropenia and/or thrombocytopenia.

One other class of medication of note is opioid antagonists. Methylnaltrexone is available as subcutaneous injections and effective in opioid induced constipations. It does not cross the blood-brain barrier therefore does not antagonise analgesia effect of the opioids. Naloxone is also available as a combination preparation with slow release oxycodone, reported to be less constipating than oxycodone alone. It is thought that naloxone in this form does not induce opioid withdrawal due to the slow release format and the low oral bioavailability from rapid liver metabolism. This is not tested in patients with impaired liver functions. Overall it is important to remember patients with advanced disease have many more constipating risk factors in addition to opioid analgesia, and the above agents may be inadequate and/or inappropriate.

In summary, constipation is a common problem in patients with advanced disease and requires thorough and ongoing assessments, reassessments and management, often including oral laxatives and rectal interventions. It is not only about clearing the initial faecal impaction, but also about re-establishing an ongoing comfortable bowel habit.

#### References:

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