

Nursing the In-house Gastrointestinal Patient: Nutrition and Beyond

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Many of our patients in the hospital setting may suffer from gastrointestinal signs such as vomiting, Diarrhoea, lethargy, abdominal pain, hyporexia/anorexia or even general malaise. It's important to note that a lot of these clinical signs can be managed easily in the hospital setting with some simple tools. One of the vital roles that nurses play in the management of in-hospital patients is the acclimation of patients to nutrition. There is an abundance of literature that shows that return to early nutrition and voluntary intake of food improves outcomes in dogs^{1,2} and cats.³ That is why your role as a nurse is vital in the hospital setting.

Some of the clinical signs we see in hospital for patients may be brought on by the disease process occurring (such as renal disease, gastrointestinal disease or liver disease) however sometimes we also play a role in the development of these signs. Surgical intervention, medications we use and stress in the hospital environment may all play a role.⁴

The most common issues we are faced with in the hospital where nutrition can help our patients is vomiting, regurgitation, hyporexia, anorexia and Diarrhoea.

Vomiting and regurgitation:

These clinical signs are important to distinguish from one another as the disease processes and treatments differ between them both. The most accurate way to differentiate them is to determine if there is any abdominal contraction prior to the event. Vomiting will occur with active abdominal contraction (heaving motions), whilst regurgitation is passive, and thus abdominal contractions are absent. As regurgitation is a passive process, the risk of aspiration pneumonia in these patients is higher and thus more of a concern to patient welfare.⁵

Vomiting may be managed through the use of medications (maropitant, ondansetron), through treatment of the underlying disease condition (e.g., removing the gastro-intestinal foreign body) or through management of the complications of hospital/surgical intervention (i.e. ileus; slowed gastro-intestinal transit time). Ileus is a major concern for patients postoperatively and can be managed through pain relief (opioid and non-opioid options exist), walking the patients regularly and ensuring adequate nutrition. Returning a patient to early enteral nutrition (voluntary food intake as soon as after surgery) has been shown to reduce ileus.⁶

Fat is known to delay gastric emptying.⁷ Limiting fat intake in our patients can assist with improving gastric motility and offset the negative effects of ileus. Diets such as Royal Canin GI Low fat are appropriate food types to feed to patients in the hospital. In addition, feeding small meals often may also help encourage regular gut movement.⁶ Diets that are chosen for in-hospital patients should be highly digestible and balanced to ensure adequate nutrition for the gut.

Additional nursing measures such as frequent walking of the patient (every 2-4 hours) will also help to improve gut motility. Many may consider delaying feeding because of vomiting. Generally, this is not recommended as studies have generated an improved outcome in early nutrition return in parvoviral patients even with Diarrhoea and vomiting.⁹

Nausea:

It's important to remember that some patients (in fact more often most patients in the hospital setting) may experience nausea before they visibly vomit. It is this nausea (along with ileus above)

that may impact the patient's desire to eat. We must not wait for a patient to vomit before we consider treating their nausea. Signs of nausea include reclused behaviour, excessive salivation, turning head away/nose up at food, fixed gazed in a sternal or sitting position, partially closed eyelids, lip licking, check puffing or anorexia/hyporexia. In humans, up to 30% of patients in the critical care unit will experience post-operative nausea and vomiting (PONV). If risk factors exist such as abdominal surgery, opioid use at the time of surgery, longer surgery time and pain, the rate increases to up to 80%.⁸ It's likely we underestimate the degree of nausea in outpatients in the hospital setting. Pharmacological management of nausea may help but adequate nutrition is also vital. Implementing feeding as soon as we can to patients is vital to ensure we reduce nausea and improve gastrointestinal health.

Hyporexia/Anorexia:

Hyporexia and anorexia (decreased appetite or loss of appetite) are clinical signs seen in most hospitalised patients.³ Although dogs may be more resilient to the effects of prolonged starvation, cats are at particular risk. Cats require higher protein and essential amino acid concentrations than dogs. Without adequate nutrition promptly, cats are at risk of developing severe systemic complications such as immunosuppression, hepatic lipidosis and intestinal impairment.³ Without adequate nutrition, enterocytes (gut cells) lose function, villous blunting occurs, and increased permeability of the gut occurs.¹⁰ In addition starvation induces changes in the gut microbiota that can have local and systemic consequences.¹⁰ It should be our number one goal to ensure adequate gut nutrition in our in-hospital patients.

Some solutions to treating hyporexia in the hospital include:

- Use of anti-nausea agents
- Adequate pain management
- Appetite stimulants
- Frequently walking patients
- Offering multiple different options/types of food
- Heating up the food (especially for cats)
- Feeding cats away from dogs/noisy environments. This can apply to anxious dogs as well
- Offering different textures of food
- Getting owners to come visit to feed their pets in a quiet room
- At-home trials for anorexic patients (some patients may only eat at home and not in hospital)
- Feeding tubes (Oesophagostomy tubes, nasogastric tubes)

The diet selected in the hospital should be highly digestible and balanced. If we are worried about a decrease in calorie intake it can be important to feed diets such as Royal Canin Recovery. These diets are higher in calories but be cautious as they are also higher in fat and as discussed this may lead to delayed gastric emptying in some patients.

Cats are particularly prone to food aversion, so food should never be force-fed.¹¹

I particularly worry about cats in hospital being fed renal diets. Renal diets are often our best weapon against treating chronic renal disease in cats.¹² If we feed these diets whilst the patient is in hospital they can develop an aversion to it later; meaning we have lost this vital treatment option. It's appropriate to take a break from these kinds of diets for cats and dogs in the hospital setting for this reason. A sensitive GI food is appropriate in most settings such as Royal Canin Sensitivity Control.

Diarrhoea:

Diarrhoea is another common issue in the hospital setting and like vomiting can occur in almost any condition in our patients. Failure to control Diarrhoea can lead to loss of important bodily nutrients, loss of fluid and thus dehydration, a negative impact on the quality of life of our patients in the hospital and the potential for surgical site infections if the faecal material contaminates the surgical site.¹³

We can manage Diarrhoea by treating the underlying condition, through fibre supplementation, probiotics, adequate nutrition, fluid therapy and important nursing care. Also, high-fibre diets such as Royal Canin Gastrointestinal High Fibre can be of benefit.

Perhaps the most exciting area of research is that into Faecal Microbial Transplants (FMT). The act of delivering healthy faeces from one patient to the sick/ill patient per rectum. This has been shown to improve outcomes in patients suffering from acute Diarrhoea, parvovirus and chronic Diarrhoea.¹⁴ Treatments like this are cheap, easy to perform and safe. There is also evidence that treatments such as faecal microbial transplants (along with fibre, some probiotics and a high-quality diet) can outcompete metronidazole in resolving Diarrhoea in the acute setting.¹⁴

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