Vomiting Or Diarrhoea An Emergency

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Abstract

Vomiting is most common clinical presentations to the emergency room. Most of the time, it is uncommon for the dog or cat to eat grass or their food and vomit and subsequently go about their lives unaffected. So, when is vomiting an emergency, the simple guidelines in the box can guide the triage veterinary.

Etiology

1. Toxins, GDV, foreign body, sepsis (potentially life threatening)
2. Possible decomposition of a chronic serious disease (renal failure, diabetes) or the effect of vomiting causes

compromise of airway, breathing and circulation

Possible Complications of vomiting are:

1. Cardiac arrest (Vasovagal reflex bradycardia)
2. Upper airway obstruction
3. Aspiration pneumonia
4. Profound haemorrhage
5. Severe hypovolaemic, distributive and/or septic shock
6. Ischemia of GI organs

On the basis of colour of vomitus, we can locate the origin

1. Clear vomitus is swallowed saliva from stomach
2. Yellow reflects refluxed digested bile from stomach
3. Green suggests undigested bile from the upper duodenum due to obstruction or ileus
4. Brown fluid with a fetid odour is from the small intestines suggesting total obstruction or generalized ileus.
5. Blood in the vomitus from primary GI causes typically appears as red coloured fluid or as “coffee grounds”. This “hematemesis” suggests a serious underlying pathology.
6. Streaks of blood present in the clear or yellow vomitus is from gastric irritation due to vomiting and is not indicative of specific pathology.

Timing and force of vomiting can give idea about the location

1. Shortly after eating indicates gastric inflammation or obstruction.

2. Large amounts of undigested food upto 6 hrs post prandial suggest pyloric obstruction or gastric atony.
3. Projectile vomiting indicates pyloric or upper duodenal outflow obstruction or ileus.
4. Non-productive vomiting or retching may indicate the presence of gastric dilatation volvulus.

Four mechanisms of diarrhea that can occur in any combination

1. Osmotic – diarrhoea – due to cellular debris in intestinal lumen.
2. Secretary diarrhoea – Bacterial endo-toxins can inhibit the ion pumps in GI epithelium resulting in secretary diarrhea.
3. Abnormal gastrointestinal motility and increased intestinal permeability – due to ileus and increased permeability.

Note

1. Any cause of GI mucosal erosions (severe shock, toxins, hyperthermia, foreign body) or blunting of GI epithelium. (e.g.- viral or bacterial agents) can cause diarrhoea by any or all mechanisms listed above.
2. The presence of blood [melena (digested) or hematochezia (fresh)] indicates that the intestinal barrier is damaged and increased protein loss and bacterial translocation anticipated.
3. Small intestinal diarrhoea typically results in greater fluid, electrolyte, and protein and acid base abnormalities than large intestinal diarrhoea and is characterized by liquid projectile faeces. Large bowel

diarrhoea generally has a “pudding” consistency with mucous or fresh blood.

Diagnosis

PCV, TS, Glucose, BUN electrolyte, venous blood gas CBC, serum chemistry, urinalysis, coagulation profile, rule out parvovirus infection.

1. Culture of faeces for salmonella and campylobacter
2. Assess T4 level and ACTH stimulation
3. Rule out CNS pathology and/or meningoencephalitis
4. Auscultation of abdomen for gastric or bowel sounds (Absence of bowel sounds suggests hypo motility, Ileus, fluid accumulation or diffuse peritonitis)

Palpation of abdomen

1. Thickening or plication may indicate an obstruction from a foreign body or mass.
2. A tympanic cranial abdomen suggests GDV and focal pain or retching/vomiting during palpation suggests involvement of local structures.

Radiograph and ultrasound

1. Segmental gas dilation of the intestines with or without evidence of a foreign object suggests obstruction
2. Intra-abdominal gas is a sign of a gastro-intestinal rupture or intra-abdominal infection with gas producing bacteria
3. Loss of detail in the right upper quadrant and a duodenal loop sign can suggest pancreatic inflammation

Treatment: Systemic antibiotics

1. **In case of hypovolaemia**, combination of isotonic replacement crystalloids and synthetic may be used.

Isotonic balanced buffered crystalloids (0.9% saline may be used if metabolic acidosis is suspected

@ 10-20 ml/Kg-I/V +hetastarch or dextran – 70

5-20 ml/Kg in dogs & 5mg/Kg in cats

2. **Analgesia can be achieved by** – 0.4 mg/Kg butorphanol

OR

0.2 mg/Kg hydromorphone

OR

0.05-0.1 mg/Kg oxymorphone

3. **When vomiting is associated** with an obstructive ileus or stimulation of the vomiting center or CRTZ zone then antiemetics are indicated alone or in combination**.**

   A. Metoclopramide 0.2-0.4 mg/Kg S/C 6-8 hour Or
   B. Followed by 0.1-0.2 mg/Kg 24 hr I/V by CRI
   C. Ondansetron 0.1-0.2 mg/Kg S/C 8 hr or 0.5 mg/Kg I/V load
   D. Followed by 0.5 mg/Kg/hr I/V by CRI
   E. Chlorpromazine 0.05 mg/Kg I/V in dog, 0.01-0.025 mg/Kg I/V (cats 4-6 hr if cardio-vascularly stable

4. **Ranitidine – 2 mg/Kg I/V 12hr**
5. **If esophageal or gastric ulceration** – sucralfate (0.5-1gm) 4-8 hr and Ranitidine 2-2.5 mg/Kg 12 hr or omeprazole (0.7 mg/Kg upto 20mg 24 hr)