“An Approach to Large Bowel Diarrhoea”

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An Approach to Large Bowel Diarrhoea

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Large Bowel Diarrhoea is a common clinical problem which can be unrewarding sometimes. However, following a very systematic and logical approach to the problem should give a definitive diagnosis in most cases. Knowing the diagnosis will help understanding the prognosis and will improve the communication with the owners to avoid any disappointment once therapeutic trials are started.

The clinical approach to large bowel diarrhea must be based on the main differentials. Five main categories of disease need to be taken into account: inflammation, infection, obstruction, dysmotility and neoplasia.

Acute inflammation also called acute colitis is a common clinical presentation. This is a non-specific disease often related to toxin ingestion (spoiled food) but bacterial or parasitic infection may also be involved. Vomiting and lethargy are common findings with acute colitis in addition to more typical signs such as straining, tenesmus and mucoid diarrhoea. This disorder, however impressive it can appear for the owners (fresh blood, explosive diarrhea), is usually self-limiting. Supportive therapy such as IV fluids, bland diet, fenbendazole and possibly a short course of metronidazole in severe cases are often used.

Chronic idiopathic inflammation also called Inflammatory Bowel Disease (IBD) is a common disease seen in middle-aged animals (any breed, any age). Clinical signs are not specific but can be indicative of small bowel involvement (anorexia, vomiting, weight loss) in some severe cases in addition to the large bowel signs. Diagnosis is based on histopathology results confirming significant mucosal inflammation and exclusion of all other potential causes of inflammation (infection, neoplasia). Colonoscopy and histopathology should always be performed BEFORE starting immune-suppressive medication. The pathogenesis of IBD is probably related to a genetic predisposition altering the normal tolerance to commensal bacteria living in the gastro-intestinal lumen. Prognosis is generally fair to good but cure is rarely seen and long-term therapy is often needed. Most low-grade IBD will respond significantly to a STRICT novel antigen diet or hypoallergenic diet combined with a local (COLON ONLY) anti-inflammatory medication called SULFASALAZINE (10-30mg/kg q8h in dogs). In more severe cases, some immunosuppressive drugs may be used including PREDNISOLONE (2mg/kg/day) (or BUDENOSIDE to avoid side effects). Additional medication like AZATHIOPRINE (dogs), CHLORAMBUCIL (cats & dogs) or CYCLOSPORINE (dogs & cats) may be combined with prednisolone in some severe cases. A few refractory cases will not respond despite very aggressive therapy.

Granulomatous colitis (or histiocytic ulcerative colitis) typically seen in young Boxers (but also French Bulldogs) is an atypical disease probably due to a combination of hereditary innate immunity defect (genetic predisposition) and mucosal infection by a specific adherent strain of E. coli. Histopathology (+ PAS staining) is usually specific for the disease. Interestingly, some dogs will respond completely to a 4-6-week course of ENROFLOXACIN (5mg/kg SID) (CURE) but up to 43% of resistance to ENROFLOXACIN was recently reported and culture of the colonic biopsies is strongly advised.

Infection is another common cause of (chronic) colitis. Helminths (Whipworms, Hookworms, Threadworms) can cause significant mucosal damage. Despite severe clinical signs in some cases (extensive blood loss), prognosis is usually fair to good. A rapid response should be observed after 5 days of FENBENDAZOLE (50mg/kg SID) in most cases. Faecal flotation testing is the only way to confirm the suspicion but lacks sensitivity and should be repeated as needed (2-3 times).

Protozoal infections are less common and can be secondary to chronic inflammation. Specific organisms such as Giardia spp. or Tritrichomonas foetus are believed to be primary responsible for chronic colitis cases. Tritrichomonas foetus is a flagellated protozoan typically infecting young cats in shelters or...
catteries. It was first reported in Australia in 2008\(^3\). Trophozoites can be identified in fresh faecal samples but because of a very poor sensitivity, PCR is often necessary to confirm the suspicion\(^4\). The best treatment to treat Tritrichomonas infection is RONIDAZOLE (30mg/kg SID for 14 days) but severe side effects can be seen and a therapeutic trial without confirmation of the diagnosis is NOT advised. Besides, 88% of infected cats show spontaneous resolution within 2 years\(^5\).

Fungal infection of the colon is rare and has not been reported in dogs or cats in Australia. Histoplasma capsulatum is a dimorphic fungus, which has been associated with colonic disease in other parts of the world. Lung involvement and systemic disease is commonly seen. Diagnosis will be confirmed by identification of the organism by cytology or histopathology. Prognosis seems to be fair for local disease when treated with ITRACONAZOLE (10mg/kg SID) for several months.

Pythiosis is an aquatic oomycete which can cause a significant and deep colonic inflammation (eosinophilic or pyogranulomatous). Young male and large breed seem to be predisposed to the infection (behaviour). Diganosis is based on the identification of the organism but is often made late. Prognosis is usually guarded to grave. Aggressive surgical resection and post-op antifungal medication can be tried.

Infection with Prototheca is well described in dogs in Australia especially in coastal Queensland\(^6\). These algae are often ingested from contaminated environments (sewage) and typically cause chronic refractory colitis before becoming systemic (CNS, eyes, kidneys). There is no efficient treatment reported and the disease is usually fatal. Diagnosis can be done by cytology or histopathology.

(Sub)obstruction can be acute or chronic and can be responsible for typical large bowel clinical signs. Pyogranulomatous inflammation caused by various infectious organisms or intussusception are the most common causes for intraluminal colonic (sub)obstruction. Enterocolic (ileocaecal) intussusception are common in dogs and cats. Clinical examination (palpation) and abdominal US (target like mass) should easily confirm the diagnosis. Surgery is always recommended. Gastro-intestinal samples should always be sent for histopathology as a primary cause (parasites, IBD, neoplasia) is often identified (50%)\(^7\).

Irritable Bowel Syndrome is another cause of large bowel clinical signs. It is a common disease in humans and the exact origin of the disease is still unknown. Stress hyper-responsiveness has been suggested. It appears like a functional disorder and histopathology shouldn’t be showing any significant inflammation. Prognosis is usually fair to good as most of these patients respond positively to digestible diet and increased dietary soluble fibers (Psyllium).

Finally, the last category often associated with chronic progressive large bowel diarrhoea is neoplasia. Malignant neoplasia are common (adenocarcinoma, 43% in dogs and 46% in cats; lymphosarcoma 19% in dogs, 41% in cats) but adenomas/polyps (17% in dogs) and stromal tumours (19% in dogs) can be associated with an excellent prognosis. Excisional biopsy is often indicated but can be technically challenging. Besides, a more diffuse infiltration is commonly seen with lymphosarcoma. FNA and cytology may be sufficient to get a diagnosis but good quality biopsies can often be obtained by colonoscopy. Histopathology can give important diagnostic and prognostic information before considering surgical options. Radiation therapy or chemotherapy may be good options in some cases.

To summarize, the clinical approach should be based on common diagnoses linked to large bowel diarrhoea. Acute colitis should rarely be associated with extensive testing. Supportive therapy (IV fluids, bland diet, anti-vomiting medication, analgesia) and FENBENDAZOLE is sufficient in most cases, which will recover within a few days. More severe cases may benefit from a short course of METRONIDAZOLE.

When cases becomes gradually worse, chronic diseases need to be considered. More testing, including faecal analysis (wet preparation, flotation, bacterial culture, PCR) and cytological examination (rectal) should be performed. At this stage, STRICT hypoallergenic diet & Psyllium & Metronidazole can be started and good response can be expected with low grade IBD cases.
If poor response is observed with therapy and infectious diseases are excluded, further testing need to be planned and will combine abdominal US, colonoscopy and histopathology before giving any immune-suppressive medication. As histopathology is pending, SULFASALAZINE can be started in addition to the diet & Psyllium. This regimen can be sufficient with most cases of IBD.

Histopathology should give a definitive diagnosis and treatment should be adapted accordingly. If IBD is diagnosed but the patient is still not responding to therapy, immune-suppressive medications can be started.