CANINE JUVENILE CELLULITIS  
(juvenile pyoderma, puppy strangles)

THE term cellulitis, rather than pyoderma, is preferred in this condition as it is sterile and does not respond to antibacterial treatment alone.

Some have classified the disease as a “pseudo-pyoderma”. The cause is unknown but dysfunction of the immune system is suspected.

Clinical features

Dachshunds, Golden retrievers, Labrador retrievers, Gordon setters, Pointers and Beagles may be predisposed but the disease can occur in any breed including cross breeds. The onset is sudden, usually affecting puppies between three weeks and four months of age and may affect one or several puppies in the litter. There is an acute swelling of the face, affecting the muzzle, lips and eyelids.

A frequent feature is a marked sub-mandibular lymphadenopathy (giving rise to the term puppy strangles). Within 48 hours vesicular, pustular, crusting and serous lesions appear with extensive exudation (Figures 1 and 2).

Lesions typically form fistulae that drain. The lesions are generally oedematous and other areas involved include the pinnae, with the development of oitis externa, and occasionally the prepuce and anus. The lesions are painful but not pruritic.

Severely affected puppies, such as the one depicted in Figures 1 and 2 may be depressed and anorectic. Less severe cases appear well apart from the skin lesions.

Diagnosis

The differential diagnosis includes:

- Chin pyoderma
- Dermoidosis
- Dermatophytosis
- Angioedema
- Adverse cutaneous drug reaction
- Canine distemper

The history and clinical findings, particularly the sub-mandibular lymphadenopathy, are suggestive. Diagnostic tests that are helpful are:

- Cytology of exudate. This will reveal a purulent to pyogranulomatous inflammation. Secondary infection may be seen.
- Cytology of lymph node aspirate. Similar findings to cytology of exudate but no infectious agents are seen.
- Histopathological examination demonstrates pyogranulomatous dermatitis and panniculitis in the absence of infectious agents.
- Bacterial culture is sterile unless there is secondary bacterial infection. Little or no improvement is seen with systemic antibacterial therapy alone.

Clinical management

- Glucocorticoids at high doses are the cornerstone of therapy. Most cases respond to prednisolone given at a dose of 2mg/kg once daily. This dose is continued until resolution of lesions (usually between 2 and 4 weeks). The same dose is then given on an alternate day dose for a few weeks before tapering over a further few weeks. Figure 3 is the same dog seen in Figures 1 and 2 after four weeks of treatment. Treatment should not be stopped too soon as it risks a relapse.
- Occasional cases seem to do better with oral dexamethasone at a dose of 0.2mg/kg once daily.
- Secondary infections are treated with systemic antibiotics such as cephalaxin or clavulane potentiated amoxicillin.
- Cyclosporine (5-10mg/kg) may be beneficial, although this is rarely necessary.

the patient's many other problems. In carrying out a nutritional assessment and monitoring progress throughout Oscar's stay, we're much more likely to see any hypoprolactinaemia reversed, wound healing and tissue repair supported, and overall reduced morbidity when it comes to complications.

A convalescent diet best fulfills this first priority and our monitoring will include a “watch out” for signs of fat sensitivity (vomiting, diarrhoea, acute abdominal pain and indicative IPlI results if suspicions are high). If the above repeats then a re-assessment is merited.

One author suggests making an atomised slurry of low-fat canned diets in dogs’ but this is rarely required in the cat.

Not wanting to sound like a broken record in these articles or give an ambiguous “trial and error” recommendation, generally it’s “any diet that the cat will eat” (or that will go down the tube) and deliver calories without causing an intolerance which is the best starting point.

A low-fat, low-residue, easily digested diet is probably the lowest risk diet1 but then we need to be flexible and respond to the needs of the individual where necessary. For example, triaditis cases exhibiting more IBD signs may benefit from a hydrolysed elimination diet once fully recovered.

As for Oscar, he’s doing fine on the critical care diet he started this journey on. The plan is to reduce the number of meals he’s receiving through the day while his jaw fracture heals and, once the oesophagostomy tube is removed, slowly transition to the lowest-fat senior diet that you and Oscar’s owner can find.


Suggested reading


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David Grant continues the series of dermatology briefs

Figure 1. A six-week-old crossbreed puppy with facial lesions of juvenile cellulitis.

Figure 2. Same puppy with evidence of severe oedematous, exudative lesions of the face. There was a marked sub-mandibular lymphadenopathy.

Figure 3. Considerable improvement after four weeks of aggressive glucocorticoid therapy.