What's your diagnosis

The rabbit with weight loss

Bronwyn Koterwas

Research suggests that a significant percentage of clinically 'normal' rabbits presenting for routine health examination to the veterinary surgeon may actually have substantial subclinical pathology. Rabbit owners may not appreciate gradual-onset weight loss due to husbandry conditions or in breeds with a thick coat. By the time a rabbit presents for clinical weight loss, multiple disease scenarios may be present.

Primary gastrointestinal disease, such as a foreign body, malabsorption, dysbiosis, sacculitis, appendicitis, megacolon, hepatic coccidiosis or liver lobe torsion, may be present. Other clinical signs are often seen with these conditions: repeated gastrointestinal ileus ('stasis'), changes in faecal quality, abdominal pain on palpation, lethargy or pyrexia.

Chronic disease is a common cause of weight loss in rabbits. Subclinical otitis media can lead to changes in mastication due to pain or facial nerve inflammation with secondary dental disease seen. Osteoarthritis, spondylosis or other orthopaedic changes may make it more difficult for a rabbit to access its food readily. Pulmonary pathology, such as pneumonia, pleural disease or other intrathoracic lesions like thymoma, can also restrict movement to feed as well as result in increased respiratory effort especially whilst eating.

A complete clinical examination must include full abdominal palpation and auscultation as well as otoscopic examination of the oral cavity and ears. Haematology and biochemistry and IgG/IgM titres or polymerase chain reaction testing for *Encephalitozoon cuniculi* are indicated. Faecal parasitology to rule out endoparasitism is also wise. Diagnostic imaging, such as orthogonal view radiography, can be useful in identifying pulmonary pathology, orthopaedic changes, dental disease, severe otitis media with bony changes or uroliths. Performing a gastrointestinal barium radiograph series will more fully characterize primary gastrointestinal pathology, such as motility disorders leading to malabsorption, foreign bodies or megacolon syndrome. Computed tomography, which can often be performed conscious, is an ideal sensitive imaging technique of all internal structures especially in debilitated patients. Ultrasonography is preferred when real-time imaging of abdominal organs

(urinary tract pathology, intestinal motility) is required or diagnostic sampling desired.

While diagnostic results are pending, cachectic rabbits need to be provided with supportive care in the form of quality nutritional support, and proprietary supplemental feeds are readily available. Owners should be trained on the proper administration of these so as to not unduly stress the rabbit or cause an aspiration event. Although good sources of nutrients, these feeds do not provide the coarse fibre needed to wear teeth appropriately. Dental disease is often seen in rabbits that are administered repeated daily syringe feeds, even over the course of a few weeks.

KEY LEARNING OBJECTIVES

- Weight loss in rabbits often involves multiple body systems and therefore requires an appropriate multidagnostic approach
- As disease processes are interlinked, a treatment plan for a cachectic rabbit must be multifactorial
- Be aware of the secondary disease that can be caused by supplementing feeds in the rabbit with weight loss

MULTIPLE CHOICE QUESTIONS

1. What is an acceptable initial treatment for weight loss in rabbits pending diagnostic testing?
(A) Antibiosis
(B) Non-steroidal anti-inflammatory analgesia
(C) Increase high-calorie feeds such as muesli and fruit
(D) Syringe feed with proprietary supplemental diet
2. What is NOT a common disease in rabbits that results in gradual weight loss?
(A) Otitis media
(B) Cystitis
(C) Osteoarthritis
(D) Hyperthyroidism
3. Acute weight loss with no other clinical signs in the rabbit is rarely caused by which of the following?
(A) Picky eating
(B) Neoplasia
(C) Gastrointestinal foreign body
(D) Pancreatitis

Canine skin masses

Spela Bavcar

Tumours of the skin and subcutaneous tissues are common in canine patients and account for about one third of all neoplasms in this species. They can be generally

classified based on the cell of origin into: epithelial, mesenchymal, melanocytic or round cell. Most tumours found in the skin tend to be primary, but metastasis and cutaneous paraneoplastic conditions can be seen. Approximately 20–40% of skin tumours are malignant. Ultraviolet radiation, chemical carcinogens, irradiation, viruses and inflammation have been implicated in tumourigenesis of some (but not all) cutaneous and subcutaneous tumours.

Appearance and growth pattern vary depending on type of tumour and location. The most common cutaneous tumours in dogs are mast cell tumours, followed by lipoma, histiocytoma, perianal adenoma, sebaceous gland adenoma, squamous cell carcinoma, melanoma, fibrosarcoma, basal cell carcinoma and others.

Cutaneous tumours can be readily identified on clinical examination and palpation of the skin. All skin lesions should be documented on a 'body map' and aspirated for a cytological diagnosis. In the case of non-diagnostic cytology, biopsies should be performed on skin masses (excisional vs incisional), especially when they are growing, changing in appearance or irritating the patient. Immunohistochemistry or special stains might be necessary to determine the diagnosis in some cases. Further diagnostics, such as locoregional lymph node assessment and thoracic and abdominal imaging, should be considered depending on the diagnosis.

Surgical excision is the treatment of choice for most skin tumours. Detailed history and description of the lesion should be provided to the pathologist to maximize the chance of establishing the correct diagnosis. Radiation therapy can be considered for incompletely excised tumours. Other local treatments include: photodynamic therapy, cryosurgery, laser ablation and hyperthermia. Systemic treatment, such as chemotherapy, is indicated in some malignant skin tumours based on diagnosis, tumour grade, presence of nodal metastasis and other factors, which might increase the chance of tumour spread.

KEY LEARNING OBJECTIVES

- Describe types of cutaneous tumour based on cell of origin
- Determine the appropriate diagnostic and staging procedures for dogs with cutaneous tumours
- Establish an appropriate treatment plan based on the type of cutaneous tumour

MULTIPLE CHOICE QUESTIONS

1. Which is the most common cutaneous tumour of dogs?
 - (A) Histiocytoma
 - (B) Perianal adenoma
 - (C) Melanoma
 - (D) Mast cell tumour
2. Melanomas are a common type of cutaneous tumour. Where do melanomas generally metastasize to?
 - (A) Lungs and kidneys
 - (B) Kidneys and liver
 - (C) Lymph nodes and lungs
 - (D) Liver and lymph nodes
3. A 6-year-old female spayed Labrador Retriever presents to your clinic with a 3-cm diameter fluctuant soft tissue mass located on the left lateral thigh. The owner reports no clinical symptoms associated with the mass, however she is quite confident the mass was not present 4–6 months ago. The dog is otherwise healthy and you note no other abnormalities on full physical examination. What is the most appropriate next step?
 - (A) Inform the owner that the mass is most likely a lipoma given its texture and location
 - (B) Measure the mass with calipers, record it and attempt fine-needle aspiration
 - (C) Strongly recommend an excisional biopsy to document the type of tumour
 - (D) Discuss the high likelihood of cancer and its dismal prognosis

The tachypnoeic cat

Lindsay Kellett-Gregory

Respiratory distress in cats, as evidenced by tachypnoea and increased respiratory effort, can be life threatening and require immediate assessment and stabilization. Causes of respiratory distress may be considered as arising from distinct parts of the respiratory system:

- Upper airway disease
- Lower airway disease
- Pulmonary parenchymal disease
- Pleural space disease
- Thoracic wall injury
- Pulmonary thromboembolic disease
- Abdominal distension
- Respiratory look-alikes.

It is usually possible to distinguish between diseases in each of the respiratory categories based on history, breathing pattern and auscultation findings. The use of

patient-side ultrasonography has become extremely useful as a non-invasive diagnostic tool that can be easily performed and is typically well tolerated by the patient. Pleural space disease, either pleural effusion or pneumothorax, is readily identifiable. Assessment of the left atrial to aortic root ratio (LA:Ao) can rule in or out a diagnosis of congestive heart failure as a cause of respiratory signs. Lung ultrasonography, looking for evidence of 'wet-lung', can help differentiate lung disease with fluid infiltrates (such as cardiogenic oedema) from those without (such as feline allergic airway disease). Use of lung ultrasonography in the trauma patient is highly sensitive for the early detection of pulmonary contusions. Additional information as to the cause of the respiratory signs obtained using this approach can help target specific stabilization and therapy and ensure a rapid response to treatment.

Initial treatment of all cats with tachypnoea should consist of supplemental oxygen and ensuring minimal patient stress and handling. Any fluid therapy should be paused until volume overload is excluded from the possible causes in a hospitalized patient. More specific stabilizing therapies may be possible if the origin of the