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TOP 5 CONDITIONS DIAGNOSED ON PHYSICAL EXAMINATION

Veterinarians increasingly rely on the most advanced technology and equipment to make diagnoses. One thing that will always be necessary, however, is the physical examination. Certainly, many diseases cannot be found on examination alone, but the ability to touch, feel, look, and listen are irreplaceable skills that will keep professionals at the forefront of veterinary medicine. Here are 5 conditions that can be diagnosed using the hands, eyes, and mind:

Oral Disease

Studies have shown the connection between periodontal disease and systemic health,[1,2] so recognizing and treating dental, periodontal, and other oral diseases appropriately has a positive effect on patient health and longevity. A dental cleaning can go far beyond merely helping a patient's bad breath.

Malocclusions, neoplasia, stomatitis, trauma, and eosinophilic granuloma complex are other important diseases that can be recognized on a physical examination. Be sure to *always* take a quick look under the tongue. During the examination, grade tartar buildup and chart any potential extractions before scheduling dental procedures. You can follow the traditional 4-point scale or establish a number system for potential extractions. Receptionists can then properly schedule surgeries so that hospital flow is maintained. Most practices can handle several simple cleanings a day, but extra time must be allotted for a patient needing multiple extractions.

Otitis

An otoscopic examination should be performed on every patient. Otitis is a sign that generally denotes an underlying cause, most commonly allergic disease, with parasites (*Demodex*, *Otodectes*, *Sarcoptes* spp), foreign bodies, neoplasia, and autoimmune diseases all distant rule-outs. Note in the medical record whether swelling and pain prevent visualization of the tympanic membrane, and palpate the canal externally to check for canal thickening or ossification.

In acute cases, the inner ear pinna and ear canal are usually erythematous and swollen, and ulcerations, excoriations, and crusts may be present. In chronic cases, pinnal hyperkeratosis, hyperpigmentation, and lichenification, as well as ear canal stenosis from fibrosis or ossification, are common.

Certain Ocular Disorders

Several structural components of the eye should be evaluated on physical examination, including both external (conjunctiva, eyelid) and internal (anterior chamber, lens, fundus) areas.

Ocular diseases can be divided into primary ocular disease and secondary ocular manifestations of systemic disease. The most common primary disorders that can be diagnosed during a physical examination include conjunctivitis, anterior uveitis, cataracts (not to be confused with lenticular sclerosis), entropion, distichiasis, corneal ulcers, and fundic abnormalities.

Secondary systemic diseases range from systemic hypertension to infectious agents to neoplasia. Recognizing fundic abnormalities requires special skill, so it is important to examine every patient's fundus and know what is normal. Then, when an abnormality is present, the next step is to identify the disease process.

Top 5 Conditions Diagnosed on Physical Examination

- Oral Disease
- Otitis
- Certain Ocular Disorders
- Heart Murmurs & Arrhythmias
- Anemia

Heart Murmurs & Arrhythmias

Clients will not pick up their pet's heart murmur or arrhythmia at home, making the physical examination even more critical. Heart murmurs are caused by the vibration of cardiac structures or turbulent blood flow, which may originate from structural heart disease or normal physiological phenomena. Arrhythmias are caused by abnormalities in the electrical conduction of the heart. It is also important to differentiate a sinus arrhythmia from a pathologic arrhythmia, as a patient with enough vagal tone for a sinus arrhythmia is *not* in congestive heart failure.

Several studies have shown a correlation in dogs between murmur intensity and severity of heart disease[3,4]; a soft murmur likely indicates mild disease and a higher grade murmur severe disease. Younger dogs with persistent murmurs may have congenital heart disease and require more careful tracking. A thoracic radiograph to show any enlarged cardiac structures is the best follow-up test.

A diagnosis is often more complicated in cats: Many may have heart disease but no murmur, and many others (especially older cats) have murmurs with no apparent heart disease. Studies have reported the prevalence of murmurs in healthy cats as high as 21%, but reports on the specificity and sensitivity of a heart disease diagnosis in cats based on the presence, location, and intensity of a murmur have varied greatly.[5,6] Unfortunately, no follow-up test has proved reliable except an echocardiogram, and commencing therapy before the onset of signs has not proved beneficial. Follow-up with an echocardiogram for feline patients should be based on veterinarian choice and client preference.

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Anemia

Anemic patients can be recognized by the presence of pale to white mucous membranes. On physical examination, all the areas that represent the patient's ability to perfuse his or her body's periphery should be checked, including the mucous membranes, sclerae, and any thin areas of skin (eg, inner pinnae).

Normal gums should be pink with a quick capillary refill time, and different colors represent different disease states. Anemia, the most common detectable condition, is represented by membranes that are pale pink to white; dark purple to brown membranes can represent intracardiac shunting of blood, methemoglobinemia, or lung disease; gray membranes may indicate cyanosis; and yellowish or icteric membranes may indicate liver disease or hemolysis. Other diseases, such as hemodynamic disorders, may also cause the mucous membranes to remain pale.

Anemia can be divided into 3 broad categories: blood loss, lack of red blood cell production, or destruction of red blood cells. The primary differentials for blood loss include external or internal bleeding, including GI bleeding. Clients are often unaware of chronic GI blood loss, so it should not be ruled out based simply on history. Lack of red blood cell production is generally related to chronic diseases such as renal disease or neoplasia. Destruction, or hemolysis, generally leads to icterus and pallor; causes include primary immune-mediated or secondary hemolytic anemia, infectious diseases, drug reactions, septicemia, and poisonous snake bites. The prognosis and treatment of all these conditions vary greatly, and further diagnostic work-up is indicated.

See Aids & Resources, back page, for references & suggested reading.