

# THE INTERPRETATION OF CLINICAL SIGNS

Michael Schaer, D.V.M.  
University of Florida  
College of Veterinary Medicine  
Gainesville, Florida

The key to making a correct diagnosis depends on obtaining an accurate patient history and doing a complete physical examination. Obtaining a history is as much an art form as it is a scientific inquiry. It must be done as objectively as possible in order to obtain a truly accurate description of the patient's problems. Failure to do so can result in a misinterpretation of the facts which can lead to misdiagnosis, needless procedures, excessive expense for the client, and a less than optimal client-doctor relationship. The following discussion will identify several clinical abnormalities that tend to be subject to misinterpretation.

Platelet disorders: Petechia are foci of pinpoint hemorrhages that can involve any of the soft tissues of the body. They usually signal the presence of a platelet disorder although they can also occur with vasculitis. Platelet disorders can arise from inadequate numbers (quantitative) or from impaired function (qualitative). Quantitative problems result from either peripheral destruction, impaired production or increased consumption. Platelet disorders commonly present clinically as small skin or mucous membrane hemorrhages or as Melanin associated with upper gastrointestinal bleeding. The most important diagnostic tests include the platelet count and the bleeding time.

Factor deficiencies: Coagulation factor deficiencies characterize as frank hemorrhaging into the body tissues; hematomas are of rather common occurrence. Ecchymoses and overt hemorrhagic diathesis require a rapid evaluation of the coagulation system with tests such as the prothrombin (PT) and partial thromboplastin times (PTI) and the activating clotting time (ACT). Factor deficiencies do cause petechia unless a disorder involving platelets coexists (DIC).

Hemolysis: In vivo hemolysis is the destruction of red blood cells within the vascular and extravascular spaces. Its causes are many ranging from toxins and drugs to autoimmunity. The classic picture of intravascular hemolysis includes: weakness, nausea, anemia, hemoglobinemia, icterus, hemoglobin, and bilirubinuria. Note that "hemolyzers" hemolyze while "bleeders" bleed.

Hemoglobinuria vs. hematuria: Hemoglobinuria is a product of hemolytic disease characterized as a dark port-wine-like colored urine that contains few intact RBC'S. Hematuria is a typical red color and reflects bleeding anywhere along the urinary tract. Patients with a bleeding tendency can also bleed into their normal urinary tract. It is possible for some upper urinary tract lesions, such as a bleeding renal tumor, to have both hemoglobinuria (as a result of the blood becoming hemolyzed in the urinary bladder during storage) and hematuria.

Vomiting vs. Regurgitation vs. Retching: Vomiting is the actual forceful oral expulsion of gastrointestinal contents accompanying many different digestive tract disorders as well as those involving other organ systems as well. Regurgitation is the more passive bringing up of esophageal contents that most commonly accompanies esophageal disorders. Retching is a forceful but unproductive attempt to vomit that can occur with constrictive esophageal pathology. It can also occur following a coughing episode.

Localizing Significance of the Various Types of Vomitus: Clear mucoid-esophageal, gastric. Red blood-esophagus, stomach. Dark red ("coffee grounds")-gastric, pylorus, very proximal duodenum. Bile stained-small bowel. Brown, malodorous (feculent)-distal small bowel, large bowel.

Blood in Stool: Bright red blood can originate anywhere distal to the mid-jejunum while dark brown-to-black stool (melena) comes from the stomach and proximal small bowel. Oral or nasal bleeding can cause melena from swallowed blood.

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Stranguria vs. Obstipation: The most important situation where this differentiation becomes significant is that involving the cat or dog with urinary obstruction. Stranguria in male dogs almost always signifies urinary outlet obstruction. The cat with urethral obstruction will make repeated trips to the litter box, sometimes accompanied by vocalization reflecting the animal's discomfort. Over a matter of hours the cat will become anorectic, begin to vomit, and become mentally depressed. The obstipated patient shows a better systemic tolerance for its GI dilemma.

Polyuria vs. Incontinence: The polyuric patient typically urinates copious volumes of dilute urine often accompanied by polydipsia. Urinary incontinence is an unconscious passage of urine that occurs while the patient is lying down or sleeping; these animals urinate normally.

Blind vs. Dementia: At first glance these two conditions might resemble each other to the uncritical observer. The blind patient will certainly bump into objects and fail to respond to a menace gesture, but its other neurological functions are normal. The demented patient might not menace mainly because the brain is malfunctioning and consequently cannot register the threatening gesture while its visual pathways might very well be normal. This patient will have accompanying neurological abnormalities.

Neurologic vs. Metabolic Weakness: Neurological weakness is usually continuous, sometimes progressive, and commonly segmental or lateralizing in its distribution; other neurological signs such as pain might be present. Metabolic weakness can also be continuous and progressive, but it can also be episodic as well. Patients with metabolic weakness tend not to segmentalize or lateralize their neurological abnormalities. The oculocephalic and pupillary light reflexes are usually retained with metabolic encephalopathy.

Lameness vs. Weakness: Lameness is the favoring of a limb because of discomfort. Depending on the distribution of the lesion, one or more limbs may be involved. Pain and gross morphologic abnormalities can usually be detected. Weakness can be accompanied by pain, but it more commonly presents in the absence of pain and any favoring of a particular limb. Weakness can be regional or diffuse in its distribution.

Pain: Pain is any localized suffering associated with a bodily disorder. It can originate from any organ system and be a source of major incapacitation to the patient. Animals will manifest its presence with either outward signs of discomfort (vocalization, biting, various motor movements) or they will show opposite signs characterized by a withdrawn behavior along with anorexia and mental depression (as commonly seen in cats).

Seizure vs. Syncope: Seizures are usually complex motor movements associated with abnormal cerebral function; alterations in the state of consciousness are commonly present. Typically, seizures have preictal, ictal and postictal components. Syncope is a loss of consciousness that lacks the three components of a seizure. It is most commonly caused by abnormal cardiac excitation or conduction although it can more rarely occur with certain metabolic disorders as well. It is important (but not always easy) to be able to differentiate narcolepsy and cataplexy from seizures and syncope.

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