New Coagulation Considerations for Trauma Injury

Coagulopathy induced by acute traumatic injury can lead to posttrauma hemorrhage and poor outcome. The objective of this study was to evaluate coagulation abnormalities in dogs after severe acute trauma; authors investigated the association between coagulation parameters and injury severity, as well as how these variables predicted body cavity hemorrhage, requirement for a blood product, and outcome.

Forty dogs from 2 university teaching hospitals were included in the study. All dogs sustained severe blunt or penetrating trauma and had blood samples collected within 12 hours of the injury. Laboratory values examined included: blood gases, lactate, platelet count, activated clotting time, prothrombin time, activated partial thromboplastin time (aPTT), fibrinogen concentration, antithrombin activity, D-dimer concentration, protein C activity, plasmin inhibition, plasminogen activity, and kaolin-activated thromboelastography (TEG).

Global Commentary
This is the first prospective observational study that described coagulation abnormalities (including TEG) in dogs following severe acute trauma and assessed the ability of coagulation and TEG variables to predict the presence of body cavity hemorrhage, necessity of blood product administration, and outcome. Based on the results, authors advised considering TEG and aPTT measurement in dogs with severe trauma injuries. Nevertheless, the results did not confirm that any of the coagulation tests were superior to clinical assessment regarding the requirement for blood product administration or prediction outcome. A similar debate is discussed in human medicine: criticalists are looking for point-of-care coagulation tests in severe trauma patients. TEG and rotational thromboelastometry are promising, but nonstandardized sampling, interoperator variability, and absence of reference ranges mitigate their results. These tests are potentially useful as means to rapidly diagnose coagulopathy, guide transfusion, and determine outcome in trauma patients, but differences in the activators in each device limit direct comparability. Standardization and robust clinical trials comparing the technologies are needed.—Isabelle Goy-Thollot, Dr Vet, PhD, DECVECC

Source

Cutaneous Drug Reaction to Methimazole

An 11-year-old cat with presumptive early hyperthyroidism was treated with methimazole at 2.5 mg q24h for ~6 months when the owner stopped treatment without veterinary consultation. Six months later, the cat re-presented with clinical signs of hyperthyroidism, and TT<sub>4</sub> levels were within normal reference range.

Commentary
There are no pathognomonic clinical signs of a cutaneous drug reaction, and most cases are diagnosed based on a high degree of suspicion. Histologic findings are equally variable and reflect clinical findings. Mural folliculitis is an inflammatory response directed at the follicular wall. Granulomatous mural folliculitis has been described in dogs but not previously in cats. In dogs, it is believed to be an immunologic syndrome and the few described cases had widespread alopecia. The case for a cutaneous adverse drug reaction in this cat is strong. There was prior exposure to the suspect drug, the onset of cutaneous lesions occurred shortly after reexposure, and clinical signs resolved after drug withdrawal. The histologic findings mirrored the clinical picture (ie, destruction of the hair follicles, alopecia). These findings were present in only ~40% of hair follicles; therefore, it is important to submit as many skin biopsy specimens as possible to enhance the chances of finding clues to a diagnosis.—Karen Moriello, DVM, DACVD

Source