

Assessing Cats with Vehicular Trauma

Amanda Abelson, DVM, DACVAA, DACVECC

Cummings School of Veterinary Medicine
at Tufts University

In the literature

Lyons BM, Ateca LB, Otto CM. Clinicopathological abnormalities associated with increased animal triage trauma score in cats presenting for vehicular trauma: 75 cases (1998–2009). *J Vet Emerg Crit Care (San Antonio)*. 2020;30(6):693-697.

FROM THE PAGE ...

Cats are commonly presented due to vehicular trauma. Rapid assessment is needed to provide appropriate emergency therapy and accurate prognosis. The animal trauma triage (ATT) score can be used to characterize disease severity and help predict outcome after traumatic insult. The ATT score is calculated based on physical examination abnormalities in 6 categories: perfusion, cardiac, respiratory, skeletal, neurologic, and eye/muscle/integument. The total ATT score ranges from 0 to 18, with higher values signifying greater severity of trauma, and can be performed by an experienced clinician or veterinary nurse. The ATT score has been validated in dogs and cats to demonstrate that for each 1-point increase, survival decreases 2.3 to 2.6 times¹; in dogs, an ATT score of ≥ 5 has been associated with 83% sensitivity and 91% specificity in predicting nonsurvival.²

This retrospective study investigated whether a correlation exists between ATT and clinicopathologic alterations in cats presented following vehicular trauma. The study included 75 cats divided into 2 groups: cats with an ATT score ≥ 5 ($n = 45$) and cats with an ATT score < 5 ($n = 30$). Differences in emergency point-of-care blood work (including packed cell volume [PCV], total protein, glucose, venous blood pH, plasma bicarbonate, base excess, venous partial pressure of carbon dioxide, plasma lactate, sodium, potassium, chloride, ionized calcium, ionized magnesium, BUN, and creatinine), Doppler blood pressure, and patient outcome

were evaluated. Cats with an ATT score ≥ 5 had lower PCV, total plasma protein concentration, venous blood pH, base excess values, plasma bicarbonate concentrations, and Doppler blood pressure values, as well as higher glucose and lactate values. This group also had a higher mortality rate (57.8%) as compared with the second group (10%).

This study showed that the ATT score and emergency point-of-care blood work can be used to identify cats with more serious injury at the time of presentation. This may aid in providing appropriate therapy and determining prognosis.

... TO YOUR PATIENTS

Key pearls to put into practice:

- 1 The ATT score has been validated in both dogs and cats, is typically easy to determine because it is based on physical examination findings, and can be helpful in determining prognosis.
- 2 Cats with an ATT score ≥ 5 often have the following clinicopathologic changes as compared with cats that have an ATT score < 5 : lower PCV, total protein levels, blood pH, plasma bicarbonate concentration, base excess values, and Doppler blood pressure values, as well as higher blood glucose and lactate values.
- 3 Cats presented after vehicular trauma and that have an ATT score ≥ 5 , or the blood work alterations listed directly above, should be suspected of having significant traumatic injury.

References

1. Rockar RA, Drobatz KS, Shofer FS. Development of a scoring system for the veterinary trauma patient. *J Vet Emerg Crit Care*. 1994;4(2):77-83.
2. Hall KE, Holowaychuck MK, Sharp CR, Reineke E. Multicenter prospective evaluation of dogs with trauma. *J Am Vet Med Assoc*. 2014;244(3):300-308.