

AFAST, TFAST, and Vet BLUE Point-of-Care Ultrasound for Traditionally Difficult Conditions

ACVIM 2017

Gregory R. Lisciandro, DVM, DABVP, DACVECC
Spicewood, TX, USA

INTRODUCTION

We will discuss traditionally difficult conditions, treated more often based on suspicion rather than evidence-based information. The Global FAST ultrasound approach of using AFAST, TFAST and Vet BLUE in combination can tackle many of these traditional conundrums.

TRADITIONALLY DIFFICULT CONDITIONS ADDRESSED BY AFAST, TFAST, AND VET BLUE

Where Is My Patient Bleeding?

Global FAST - AFAST, TFAST, and Vet BLUE - survey 4 spaces and lung. Global FAST should be applied to all coagulopathic and at risk for bleeding cases. The abdominal cavity, retroperitoneal space, pleural space, pericardial sac, and lung are surveyed and interventions may take place to better treat the patient prior to overt signs.

Is It Feline Asthma or Left-Sided Congestive Heart Failure?

The use of Vet BLUE lung ultrasound rapidly answers this historically difficult question in <90 seconds because the Vet BLUE profiles are radically different.

Does My Patient Have Pulmonary Thrombo-Embolism?

Better evidence may be gained for the presence of PTE by using the TFAST long-axis 4-chamber view and evaluating the right ventricular to left ventricular ratio (RV:LV); and through the use of Vet BLUE and the finding of the wedge sign representative of small infarcts on the lung surface.

Does My Patient Have Pulmonary Hypertension?

The respiratory case being treated for pneumonia that in fact has pulmonary hypertension. Using the TFAST long-axis 4-chamber view and evaluating the right ventricular to left ventricular ratio (RV:LV); and characterizing the caudal vena cava are means to support the presence of PHT, explaining why your patient is not improving on antibiotics and triggering an echo in an otherwise occult condition.

Left Atrial Tears in Mitral Valve Disease More Common Than You Think?

Using Vet BLUE and TFAST first line and during hospitalized care as part of your cardiac evaluation helps detect this otherwise missed condition.

Does Your Collapsed Dog Have Anaphylaxis?

Gallbladder wall striation due to gallbladder intramural edema is a marker for canine anaphylaxis. How to recognize the sonographic finding and why you should look beyond the diaphragm for other important rule outs will be discussed; and briefly discuss the canine anaphylaxis-related heparin-induced hemoabdomen.

How to Better Interpret the Nebulous Thoracic Radiograph?

You are missing pulmonary disease by not using proactive Vet BLUE lung ultrasound. Use Vet BLUE to complement thoracic radiography and better help pick your next best respiratory test to more accurately and expediently diagnose and treat.

Why You Should Do Vet BLUE in All Vomiting Patients?

Aspiration pneumonia may be detected point-of-care in your hospitalized patients using Vet BLUE.

How to Monitor Pneumothorax by Using the Lung Point?

Pneumothorax can not only be diagnosed point-of-care using TFAST but may also be monitored through the use of the lung point.

References

1. Lisciandro GR, Fosgate GT, Fulton RM. Frequency and number of ultrasound lung rockets (B-lines) using a regionally based lung ultrasound examination named Vet BLUE (veterinary bedside lung ultrasound exam) in dogs with radiographically normal lung findings. *Vet Radiol and Ultrasound*. 2014;55(3):315–322.
2. Lisciandro GR, *et al*. Frequency and number of ultrasound lung rockets (B-lines) using a regionally based lung ultrasound examination named Vet BLUE (veterinary bedside lung ultrasound exam) in cats with radiographically normal lung findings. *J Vet Emerg Crit Care*. 2016; In press.
3. Ward JL, Lisciandro GR, Tou SP, Keene BW, DeFrancesco TC. Evaluation of point-of-care lung ultrasound (Vet BLUE protocol) for the diagnosis of cardiogenic pulmonary edema in dogs and cats with acute dyspnea. *J Am Vet Med Assoc*. 2015; In press.
4. Lisciandro GR, *et al*. Absence of B-lines on lung ultrasound (Vet BLUE protocol) to rule out left-sided congestive heart failure in 368 cats and dogs (abstract). *J Vet Emerg Crit Care*. 2016.
5. Ward JL, Lisciandro GR, DeFrancesco TC. Distribution of alveolar-interstitial syndrome in dyspneic veterinary patients assessed by lung ultrasound versus thoracic radiography. *J Vet Emerg Crit Care*. 2016; In press.
6. Kulhavy DA, Lisciandro GR. Use of a lung ultrasound examination called Vet BLUE to screen for metastatic lung nodules in the emergency room (abstract). *J Vet Emerg Crit Care*. 2015.
7. Lisciandro GR. Abdominal FAST (AFAST)-detected hemorrhagic effusion in 11 dogs with acute collapse and gallbladder wall edema (halo sign) with presumed anaphylaxis (abstract). *J Vet Emerg Crit Care*. 2016.
8. Lisciandro GR. Focused abdominal (AFAST) and thoracic (TFAST) focused assessment with sonography for trauma, triage and monitoring in small animals. *J Vet Emerg Crit Care*. 2011;20(2):104–122.
9. Lisciandro GR, Lagutchik MS, Mann KA, *et al*. Evaluation of an abdominal fluid scoring system determined using abdominal focused assessment with sonography for trauma (AFAST) in 101 dogs with motor vehicle trauma. *J Vet Emerg Crit Care*. 2009;19(5):426–437.
10. Lisciandro GR. Case series of dogs with the gallbladder halo sign associated with pericardial effusion and right-sided heart failure during FAST exams. Unpublished, 2014.

SPEAKER INFORMATION

(click the speaker's name to view other papers and abstracts submitted by this speaker)

Gregory R. Lisciandro, DVM, DABVP, DACVECC

Hill Country Veterinary Specialists

Spicewood, TX, USA