



# AVHTM Newsletter

## Special Events of Interest:

- ICVHTM 21st International Conference on Veterinary Hematology and Transfusion Medicine: March 4-9, 2019 (Rio de Janeiro, Brazil)
- American College of Veterinary Internal Medicine (ACVIM) Forum: June 5-8, 2019 (Phoenix, AZ)
- European College of Veterinary Emergency and Critical Care (ECVECC) Congress: June 6-8, 2019 (Tallinn, Estonia)
- International Veterinary Emergency and Critical Care Society (IVECCS) Meeting: September 6-10, 2019 (Washington, DC)
- Congress of the European College of Veterinary Internal Medicine – Companion Animals (ECVIM-CA): September 19-21, 2019 (Milano, Italy)

A 501(c)(3) nonprofit professional association

Volume 2, Issue 3

## IVECCS Recap

The International Veterinary Emergency and Critical Care Symposium (IVECCS) took place last

month in New Orleans, LA and was a huge success.

The organizers had to close registrations ahead of time because they worried they would exceed the capacity of the event's center! AVHTM track sessions were well attended and included practical sessions on incorporating viscoelastic testing into veterinary practice. Additionally,



there were sessions on trauma-induced coagulopathy presented from a criticalist's and physician's per-

spective. Dr. Juan Duchesne, a surgeon specialist at the Louisiana State University Healthcare Center, was the highlight presenting several sessions regarding transfusion and damage-control resuscitation. The last day also featured a transfusion medicine workshop. Clearly the trauma theme of this year's conference was conducive to a lot of transfusion and hematology-related topics!

## AVHTM Updates

Our group is continuing to grow – we now have more than 300 members! Recently, our email group has shared discussions on several topics including use of expired cryoprecipitate, management of dogs with vWD, obtaining an IACUC for community blood banks, feline sedation protocols, liquid plasma, quad-bag collection systems, and heat sealers. We encourage AVHTM members to

continue using this fantastic resource by emailing questions and sharing ongoing research studies in the coming months.

We also have more than 630 follows on Facebook and have good engagement with our posts in terms of people liking or sharing them. The two most engaging posts from the last few months are "Test your knowledge of blood transfusion

products in dogs and cats with a quiz from [Clinician's Brief](#)" (posted August 31) and "[UC Davis School of Veterinary Medicine researcher](#) discovers rare platelet disorder (Glanzmann Thrombasthenia) in a cat" (posted September 24). Please 'like' or 'follow' us on Facebook and feel welcome to post links, images, and questions pertinent to veterinary hematology and transfusion medicine.

## Transfusion Reactions: A Case for Consensus Definitions (by: Beth Davidow, DVM, DACVECC, AVHTM Member)



This year at IVECCS, I presented preliminary data from a retrospective study our hospital performed comparing the acute reaction rate between patients receiving leukoreduced and non-leukoreduced packed red blood cells. As I reviewed the veterinary literature on transfusion reactions, I found that publications vary in incidence and description of these reactions. For canine red blood cell reactions, the complication rate varies from 13-37%.<sup>1-3</sup> Some of the variation is most likely due to differences in the definitions of transfusion complications and reactions. The difference in definitions makes it difficult to compare studies. These differences also make it difficult to assess which interventions might make transfusions safer for our patients.

On the human side, the National Healthcare Safety Network developed a Hemovigilance reporting system.<sup>4</sup> The system has defined terms to allow and promote national transfusion reaction reporting. This national reporting allows for a more global picture of reactions across the country. Each of the reaction types has specific criteria to help with categorization. In addition, reactions are graded on severity and given a likelihood of being related to the transfusion. This agreement on terms allows for a better conversation and research into these importance incidents.

Based on published veterinary studies, we know that hemolysis, fever, respiratory signs, gastrointestinal signs, neurologic signs, and allergic reactions are the most important clinical syndromes we see acutely after transfusion. However, we do not have clear guidelines on defining febrile non-hemolytic transfusion reactions and differentiation from other types of reactions that may cause fever.<sup>5</sup> We also do not have clear agreed upon definitions for differentiating different causes of respiratory signs,<sup>6</sup> nor do we have clear definitions on level of severity.

I would like to propose that AVTHM takes the lead on this important project. ACVIM currently publishes consensus statements on diseases and syndromes of importance. The ACVIM board of regents identifies important topics and panel members with expertise in the topic. The panel puts together initial recommendations and then circulates the draft for comments and suggestions from the membership. After incorporation of the feedback, it is submitted for publication and editing. AVTHM could undertake a similar process for issues of importance in transfusion medicine and start with the issue of transfusion reaction definitions.

*Dr. Davidow is the founder of the ACCES Blood Bank and was its medical director from 2004-2017. She is currently a consultant on VIN and blogs at vetidealist.com.*

*If you are interested in being part of this initiative, please email Dr. Davidow at [davidow27@gmail.com](mailto:davidow27@gmail.com).*

### References:

1. Bruce JA, Kriese-Anderson L, Bruce AM, Pittman JR. Effect of premedication and other factors on the occurrence of acute transfusion reactions in dogs. J Vet Emerg Crit Care 2014.
2. Holowaychuk MK, Leader JL, Monteith G. Risk factors for transfusion-associated complications and nonsurvival in dogs receiving packed red blood cell transfusions: 211 cases (2008-2011). J Am Vet Med Assoc 2014; 244(4):431-437.
3. Maglaras CH, Koenig A, Bedard DL, Brainard BM. Retrospective evaluation of the effect of red blood cell product age on occurrence of acute transfusion-related complications in dogs: 210 cases (2010-2012). J Vet Emerg Crit Care 2017; 27(1): 108-120.
4. <https://www.cdc.gov/nhsn/pdfs/biovigilance/bv-hv-protocol-current.pdf>
5. Patterson J, Rousseau A, Kessler RJ, Giger U. In Vitro Lysis and Acute Transfusion Reactions with Hemolysis Caused by Inappropriate Storage of Canine Red Blood Cell Products. J Vet Intern Med 2011; 25(4): 927-933
6. Thomovsky EJ, Bach J. Incidence of acute lung injury in dogs receiving transfusions. J Am Vet Med Assoc 2014; 244: 170-174.

## Recently Published Articles

The articles listed below are those published **June – September 2018** in the field of veterinary transfusion medicine, blood banking, and hemostasis:

- **Blood haematological values of Barb horses in Algeria.** Chikhaoui M, Smail F, Adda F. Open Vet J. 2018;8(3):330-334. doi: 10.4314/ovj.v8i3.13. Epub 2018 Sep 12.
- **Haematological and morphological evaluation of feline whole blood units collected for transfusion purposes.** Spada E, Perego R, Baggiani L, Proverbio D. J Feline Med Surg. 2018 Sep 18:1098612X18798841. doi: 10.1177/1098612X18798841. [Epub ahead of print]
- **Effects of platelet-rich plasma on tooth replantation in dogs: a histologic and histomorphometric analysis.** Yang JM, Yang KI, Lee KH, Choi SH, Kim BO, Park JC, Yu SJ. J Periodontal Implant Sci. 2018 Aug 31;48(4):224-235. doi: 10.5051/jpis.2018.48.4.224. eCollection 2018 Aug. Free PMC Article
- **Ultrasound measurements of the caudal vena cava before and after blood donation in 9 greyhound dogs** Marshall KA, Thomovsky EJ, Brooks AC, Johnson PA, Lim CK, Heng HG. Can Vet J. 2018 Sep;59(9):973-980.
- **Influence of needle gauge and venepuncture difficulty on thromboelastography in healthy cats.** Shin D, Nam A, Song KH, Seo KW. J Feline Med Surg. 2018 Sep 4:1098612X18796672. doi: 10.1177/1098612X18796672. [Epub ahead of print]
- **Establishing a protocol for thromboelastography in sea turtles.** Barratclough A, Hanel R, Stacy NI, Ruterbories LK, Christiansen E, Harms CA. Vet Rec Open. 2018 Aug 13;5(1):e000240. doi: 10.1136/vetreco-2017-000240. eCollection 2018. Free PMC Article
- **Comparison of the methods for platelet rich plasma preparation in horses.** Lee EB, Kim JW, Seo JP. J Anim Sci Technol. 2018 Aug 18;60:20. doi: 10.1186/s40781-018-0178-4. eCollection 2018. Free PMC Article
- **Comparison of multiple thawing techniques on thaw time and stability of hemostatic proteins in canine plasma products** Torkildsen L, Bishop MA, Barr JW, Pashmakova MB. J Small Anim Pract. 2018 Jul 26. doi: 10.1111/jsap.12903. [Epub ahead of print]
- **Crossmatching Maternal and Fetal Blood in Sheep.** Musk GC, Adams MJ, Usuda H, Kemp MW, Sharp CR. Comp Med. 2018 Aug 1;68(4):294-297. doi: 10.30802/AALAS-CM-17-000126. Epub 2018 Jul 23.
- **The effectiveness of platelet-rich plasma on the skin wound healing process: A comparative experimental study in sheep.** Badis D, Omar B. Vet World. 2018 Jun;11(6):800-808. doi: 10.14202/vetworld.2018.800-808. Epub 2018 Jun 14. Free PMC Article
- **Assessment of the red blood cell proteome in a dog with unexplained hemolytic anemia.** Black VL, Heesom K, Whittington F, Davis S, Tasker S, Adamantos S, Davidson AD. Vet Clin Pathol. 2018 Sep;47(3):377-385. doi: 10.1111/vcp.12627. Epub 2018 Jul 19.
- **Twelve autologous blood transfusions in eight cats with haemoperitoneum.** Cole LP, Humm K. J Feline Med Surg. 2018 Jul 1:1098612X18785742. doi: 10.1177/1098612X18785742.
- **Assessment of Canine Autologous Conditioned Plasma™ cellular and transforming growth factor-β1 content.** Franklin SP, Birdwhistell KE. Front Vet Sci. 2018 Jun 11;5:105. doi: 10.3389/fvets.2018.00105. eCollection 2018. Free PMC Article
- **Use of a platelet-rich plasma-collagen scaffold as a bioenhanced repair treatment for management of partial cruciate ligament rupture in dogs.** Sample SJ, Racette MA, Hans EC, Volstad NJ, Schaefer SL, Bleedorn JA, Little JP, Waller KR 3rd, Hao Z, Block WF, Muir P. PLoS One. 2018 Jun 19;13(6):e0197204. doi: 10.1371/journal.pone.0197204. eCollection 2018. Free PMC Article
- **Comparison of three blood transfusion guidelines applied to 31 feline donors to minimise the risk of transfusion-transmissible infections.** Marenzoni ML, Lauzi S, Miglio A, Coletti M, Arbia A, Paltrinieri S, Antognoni MT. J Fel Med Surg. 2018 Aug;20(8):663-673. doi: 10.1177/1098612X17727233.
- **Long-term postoperative effects of administration of allogeneic blood products in 104 dogs with hemangiosarcoma.** Ciepluch BJ, Wilson-Robles HM, Pashmakova MB, Budke CM, Ellison GW, Thieman Mankin KM. Vet Surg. 2018 Sep 21. doi: 10.1111/vsu.12967. [Epub ahead of print]



## AVHTM

PO Box 1234  
Sahuarita AZ 85629-1004

Phone: (844) 430-4300

Email: [info@avhtm.org](mailto:info@avhtm.org)

**We're on the web!**

**[www.avhtm.org](http://www.avhtm.org)**



**AVHTM** is an IRS approved 501(c)(3) nonprofit professional association composed of veterinarians, hematologists, academics, veterinary technicians, blood bankers, and interested public who desire to further scientific advances in transfusion medicine and veterinary hematology.

We engage in veterinary research, promote industry standards, develop guidelines for canine and feline blood collection and processing, and publish scientific research in peer-reviewed publications.

Visit us online to learn more about AVHTM!

### **AVHTM BOARD OF DIRECTOR ELECTION RESULTS**

AVHTM would like to thank everyone who participated in this years' election held in June. The following were elected for a two (2) year term:

- Sarah Musulin
- Marie Holowaychuk
- Karen Humm
- Katie Nash

We welcome Karen and Katie and welcome back Sarah and Marie.

### **MEMBERSHIP BENEFITS**

As an AVHTM member, you are eligible for the following:

- Reduced IVECCS registration fee (veterinarians save \$100 and technicians save \$25!)
- Access the a "Members Only" section of the AVHTM website, which includes access to:
  - o Other AVHTM profiles
  - o PubMed articles
  - o Forum for posting questions, cases, and research
- Ability to ask and answer questions posted to the AVHTM members only email group.

*Please feel welcome to share this newsletter with interested colleagues and encourage them to become an AVHTM member!*