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GREYHOUND HEALTH AND WELLNESS QUARTERLY



THE OHIO STATE UNIVERSITY
VETERINARY MEDICINE

<http://vet.osu.edu/1872.htm>



Katie Uyehara.

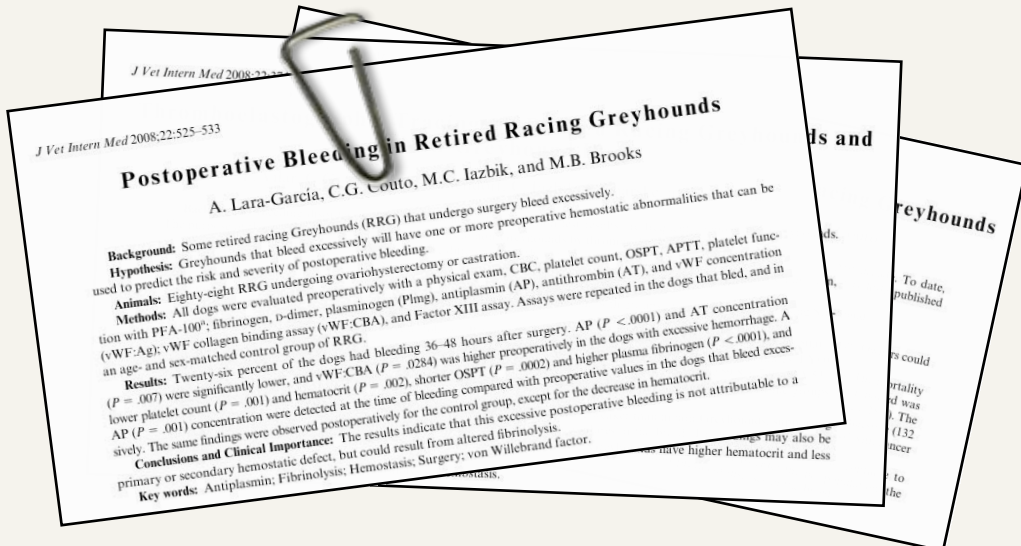
WHY DO GREYHOUNDS BLEED?

In the Greyhound community, the term "Greyhound bleeder" is typically used for dogs that bleed either spontaneously or after minor trauma or a simple surgical procedure.

Simple surgical procedures such as spays, neuters, dewclaw removals, or laparotomy or major surgeries such as amputation in Greyhounds with OSA frequently results in severe postoperative bleeding (24-48h post-surgery) around the surgical site, leading to subcutaneous blood accumulation in the other limbs, ventral thorax, and ventral abdomen.

Generally Greyhound bleeders required intensive care management and depending on the severity of the bleeding, transfusion of red blood cells and/or fresh frozen plasma, leading to a transient poor quality of life post amputation, lengthy hospitalization, and high medical bills. Bleeding dogs typically have normal hemostasis profiles [normal one-stage prothrombin time (OSPT), activated partial thromboplastin time (APTT), and platelet counts].

We recently publish a study where 88 retired racing Greyhounds (RRGs) from Greyhound Adoption of Ohio (Chagrin Falls, Ohio) were spayed or neutered at The Ohio State University -Veterinary Teaching Hospital between November 2004 and February 2006



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In that study we validated a pediatric bleeding score ranging from 0 to 4 in RRGs; dogs with scores ≥ 2 were considered "bleeders".

- Score 0 Definitely no new bleeding
- Score 1 Questionable new petechiae or bruising
- Score 2 Definite new cutaneous and/or mucosal hemorrhagic lesions
- Score 3 Moderate to severe cutaneous or mucosal bleeding without measurable decline in hemoglobin concentration
- Score 4 Severe external bleeding of sufficient magnitude to decrease hemoglobin by more than 2 gm/dl

Bleeding Score in Greyhounds 48 hours after surgery.



Anya, (grade 0)



Bací, (grade 1)



Dave, (grade 2)



Lanna, (grade 3)



Elga, (grade 4)

Several tests were used to evaluate primary and secondary hemostasis (clotting) in the 88 RRG who underwent routine spay or neuter at OSU-VTH.

Although none of the dogs experienced intra-operative or immediate postoperative bleeding, 26% of the dogs (23/88) had delayed postoperative bleeding 36 to 48 hours after surgery.

The observed signs of bleeding consisted of cutaneous bruising that extended from the area of the surgical incision toward the periphery. There was no bleeding from mucosal surfaces or in areas distant from the surgical site.

None of the dogs in this study required transfusion of blood components and the bleeding was self-limiting; however some bruising was still present at the time the dogs were discharged, 4 days after the surgery.

There were not abnormalities found in any of the test used to evaluate hemostasis in the Greyhound, which means that this bleeding does not seem to be attributable to a primary or secondary hemostatic disorder. Our data suggest that enhanced fibrinolysis (clot or thrombus dissolution) could play a role in the development of this complication. Under normal circumstances, the dissolution of the clot is maintained in equilibrium, if the balance is lost, the patient develop excessive fibrinolysis and delayed postoperative bleeding, which is what we see in Greyhounds.

In our experience administration of fresh frozen plasma or Aminocaproic acid (AA - Amicar®), which is a commercially available inhibitor of fibrinolysis (procoagulant) commonly used in humans with postoperative bleeding, can prevent severe postoperative bleeding in Greyhounds undergoing surgery.

FOR VETS
The following tests were used to evaluate primary hemostasis: PLT, platelet function with PFA-100a closure time (CT), von Willebrand factor antigen concentration (vWF:Ag), and von Willebrand factor activity with collagen binding assay (vWF:CBA). Secondary hemostasis was evaluated with APTT, OSPT, fibrinogen concentration, anti-thrombin (AT) activity, and Factor XIII (FXIII). The fibrinolytic pathway was evaluated by measuring plasminogen activity (Plmg), antiplasmin activity (AP), and D-dimer concentration.

STROKES IN GREYHOUNDS

Unfortunately Greyhounds are not only prone to bleeding; some of them also tend to clot excessively. We have seen quite a few Greyhounds with acute/peracute cerebrovascular events caused by clotting in the brain or spinal cord (infarct). They present with acute neurologic signs ("symptoms").

"Strokes" are classified as either:

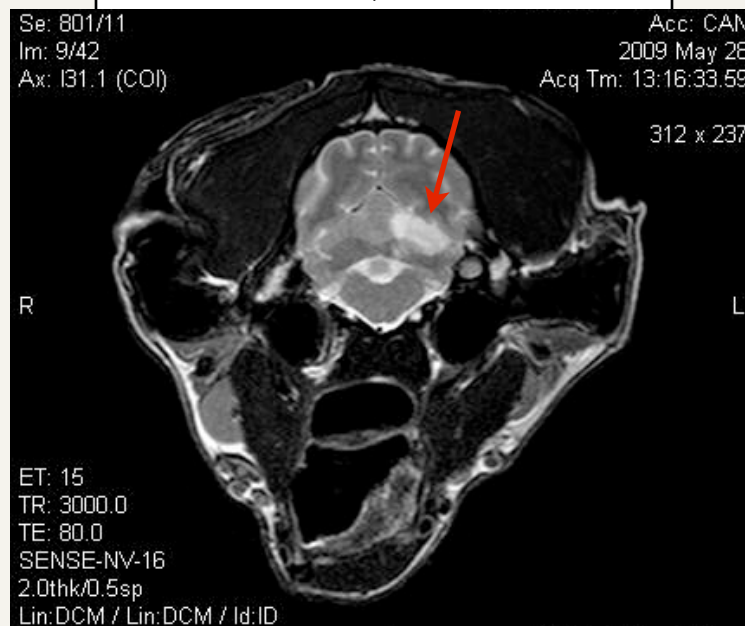
- ISCHEMIC: a clot cause interruption of the blood supply and dead of the tissue irrigated.
- HEMORRHAGIC: Caused by the rupture of a blood vessel.

In most Greyhounds we have MRIs on, they were due to clotting and not bleeding.

DIAGNOSIS:

In order to confirm the diagnosis, the patient needs a complete neurological examination and a CT scan or MRI. However, in our experience, the most common cause of acute neurologic signs in the breed are ischemic strokes.

MRI in a Greyhound showing an intracerebral infarct in the pontine region.



Greyhounds with ischemic neurovascular events respond well to anticoagulants (blood thinners); we use baby aspirin and an antacid (Pepcid AC) and most patients recover uneventfully within days or weeks with appropriate physical therapy.

IMPORTANT: administration of corticosteroids typically **WORSENS** ischemic strokes in dogs!

What's New?

"The OSU Greyhound Health and Wellness Program will have its first Conference"

Who can attend? Owners, adoption groups, and veterinarians.

When: March 6th, 2010

Where: At The Ohio State University (Columbus, OH).

We will have several speakers discussing breed related issues, dealing with cancer, latest developments on Greyhound research and more.

We will send you an email with more information. **STAY TUNED!!**

"GREYHOUND PICTURE OF THE QUARTER"

And the winner is!!!!

Flash Cerreta (1999-2008)
Flash was the most confident alpha dog, he loved his toys, getting petted and laying upside down.



Thank you very much
all, for sending us
your pictures!

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- * Cristina Iazbik, DVM
- * Liliana Marin, DVM
- * Sara Zaldivar, DVM
- * Dawn Hudson, RVT

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WE DEPEND ON YOUR GENEROSITY!!

"Our mission of helping the Greyhounds is supported by your kindness".

To make a donation to the Greyhound Health and Wellness Program please use the link below to the secure website for online giving, or contact Dr. Guillermo Couto (couto.1@osu.edu) or Karen Longbrake (longbrake.1@osu.edu).

https://www.giveto.osu.edu/igive/OnlineGiving/fund_results.aspx?Source_Code=WA&Fund=310050

We thank you very much for your generous support so that we may continue our mission to help the Greyhounds.

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