



McMASTER HEAP VETERINARY PRACTICE

GIVING BLOOD TO SAVE A LIFE

Recently my Macy and Hannah's greyhound gave up their blood to help save a life, both within days of each other. The dog needing the blood ended up with 4 blood transfusions over 10 days and sadly we couldn't save her. When a patient requires a blood transfusion, things need to happen fast as the patient has lost too much blood for sustainability of life. For patients that have lost blood volume, whole blood or packed red blood cells are required.



Left: Percy getting a toy after being a blood donor.

Below: Macy gave up 400 mls of blood. Here she is sedated for the procedure.



We fairly commonly see blood loss anemias with poisonings like rat bait, bleeding spleens or ruptured tumours and trauma like road traffic accidents. Some of these patients will exhibit weakness, laboured breathing and wobbliness. Transfused blood to a dog with a non regenerative anemia will last 120 days, so it can stabilise a dog for 2-3 months allowing diagnostic tests to be completed. We don't keep stored fresh blood products so if we can't source from the NZL Blood Bank, we have a few of our own donors with staff pets. To become a donor first the dog has to be healthy, fully vaccinated and parasite free, not on medications and not had cancer or chemotherapy in the past. They need to weight over 25kg and have a PCV over 35%. Greyhounds are perfect donor dogs for this reason. We then need to get their blood type to make sure they are the donor type (Ideally DEA 1.1 or DEA 1.2 negative). The recipient dog also needs the same blood type as the donor and both dogs need to

be cross matched at the laboratory, on the day of the transfusion. Usually we sedate the donor dog to remove the blood needed for the patient in need. We check the donor dogs amount of red blood cells (PCV) before we remove 10% to 15% of the donors blood volume. To prevent hypovolemia (low blood volume) the donor should receive intravenous fluids (IVF) at the commencement of the transfusion. A dogs total blood volume is 90mls/kg bodyweight so Macy could give between 300-400mls blood safely. The donor blood is given to the patient in need via the jugular or cephalic vein through a filtered giving set, which reduces clots entering the circulation. Blood can be warmed to body temperature before administration. Slow blood flow rates are advised for the first 30 minutes of the transfusion to detect a possible reaction. Signs of a transfusion reaction are hives,

intense scratching, vomiting, fevers, depression, changes in breathing and heart rates, convulsions or cardiac arrest. Luckily I haven't witnessed a transfusion reaction ever, probably because we type and crossmatch our donors carefully, and have a nurse sitting with these patients observing their vitals. Transfusion medicine isn't common, but if and when you need to save a patients life, your whole team need to be ready to go fast. Having donor dogs and cats in the practice we have typed and we know are healthy saves a huge amount of time and potentially a life. If you'd like your dog to be a donor dog then let us know. You can never have too many blood donors.



Left: Pearl receiving Macy's blood. Pearl was the most beautiful dog.

UPDATE ON LOLA'S SURGERY

Last week I operated on my beautiful 14 year old Labrador Lola to remove a potentially malignant, life threatening Anal Gland cancer (I'm still awaiting the histology results). I took her for a CT scan at Pacific Radiology to check she was cancer free elsewhere before embarking on this major surgery. She flew through the anaesthetic, even getting a teeth clean and pedicure before wake up. She is doing fabulously, taking all her medications



reluctantly (unless in tasty sausage meat), back exercising and has been perfect to care for. Lola is a regular feature on our FB page so hop on to follow her journey.

Dr Michele McMaster

