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Platelet Rich Plasma Therapy (PRP) Q and A

What is regenerative medicine?

Regenerative medicine utilizes the body's own cells to heal and regenerate damaged tissues in acute and chronic conditions. It is has been used in human medicine for many years and is now available for our veterinary patients. Two common types of regenerative medicine that are available in veterinary medicine are Platelet Rich Plasma Therapy (or PRP) and Stem Cell therapy. PRP therapy is currently available at our hospital.

What is Platelet Rich Plasma Therapy or PRP?

PRP is a concentrated blood sample that contains isolated cells (platelets) and the fluid portion of the blood (plasma). PRP can help regenerate and heal tissue and also decrease pain and inflammation in joints affected by osteoarthritis and a variety of tendon conditions in veterinary patients.

How does PRP help regenerate and heal tissue?

Platelets release natural chemical mediators that recruit "clean-up" cells to an area of injury that will remove dead and damaged cells. They also release proteins called "Growth Factors" which are responsible for tissue regeneration. They are really the super cells of the body and if you have ever had a cut or wound, you have likely already seen the power of platelets yourself with first stopping bleeding and then orchestrating the healing process.

Are there different types of PRP systems available?

With such positive results seen with PRP in veterinary patients, some medical companies are marketing human systems on the veterinary market. The problem with these processing systems is that they are not calibrated for canine patients. Processing is species specific due to the differences in blood cells. Some veterinary systems that are on the market do not isolate the cells properly resulting in cells, other than platelets, contaminating the samples which can actually do more harm than good. We have invested in a PRP processing system that has studies to support that the proper concentration of platelets are being isolated from the patient's blood which is vital for the therapy to work.

What conditions are PRP used for?

The main use for PRP in veterinary medicine is in the management and treatment of osteoarthritis (OA) and tendon conditions (ex. biceps tenosynovitis). It can also be used to aid in healing after a cruciate ligament repair or other orthopedic surgery.

Where does the PRP come from?

PRP is collected from the patient being treated by obtaining a blood sample and processing it the same day as treatment. As the PRP is a component of the patient's own blood, there are no side effects or cross-reactions.

How is PRP administered?

After a diagnosis has been established and the affected site(s) are identified by x-ray +/- ultrasound, the sample that has been collected and processed from the patient, is injected directly back into the affected joint or tendon. This is local form of therapy where healing and anti-inflammatory action is directed at the site that needs it. Multiple areas can be treated at the same time. For example, a patient may have hip and knee osteoarthritis and therefore these can be treated at the same time.

Are there any side effects to PRP therapy?

There are no side effects as PRP is collected directly from the patient's own blood. A small number of patients may experience some pain for 24-48 hours after the injection, but this is alleviated by prescribing pain medications for a few days after the treatment.

What are the advantages of PRP therapy over using systemic pain medications for osteoarthritis (example Metacam, Rimadyl)?

Systemic medications expose the entire body to the effects. Because of this, there is a potential for side effects related to giving systemic medications. Some common examples are stomach upset or gastric ulceration. Senior pets often have other conditions that make them poor candidates for some of these medications due to the increased risk of serious side effects, therefore PRP is a safe alternative in these patients. Systemic anti-inflammatories do not help regenerate tissue, and this is one distinct advantage to PRP therapy.

How do I know if my pet is a candidate for PRP therapy?

If your pet has been on long term medications for osteoarthritis or is scheduled for or has had joint surgery, they may be a candidate. PRP can be administered at the time time of surgery. If your pet is not having a good response to medications or if they are experiencing side effects to medications, then they may be a candidate. Some pet owners are looking for alternatives to long term medications and may seek out this type of therapy as a more natural way to treat osteoarthritis and injury in their pets. Any patient showing signs of osteoarthritis or joint or tendon injury may be a candidate.

What are signs of osteoarthritis in my pet?

Many pet owners will report that their pet appears to be "slowing down". They may not want to walk as far or have trouble rising or laying down. Reluctance to go up or down stairs or to jump into the car, or avoiding floors that are slippery are also signs. Limping is a distinct sign of joint or tendon pain and should be evaluated by a veterinarian. Pets that have joint pain will not cry out or vocalize until the pain is really bad, so don't wait until this is happening before having them evaluated. Pets have a tremendous capacity to cope and live with chronic pain.

Why is the treatment of pain in pets so important for their quality of life?

Pets have a tremendous capacity to cope with chronic pain but this can be very detrimental to their overall quality of life. It can affect their appetite and body condition leading to obesity and muscle atrophy. With decreased activity, decreased interaction with family members can lead to decreased mental health and stimulation. Untreated pain can lead to a premature decision to euthanize a patient.

I am concerned that my pet is in pain but I am not sure?

Pain in veterinary patients can be subtle. A physical exam and evaluation by a veterinarian will help assess your pet's pain and determine what health conditions may be present.

My pet appears to be slowing down but is still eating well so he/she must not be in pain?

This is a common misconception. Many pets that are painful will continue to eat and learn to cope with their pain.

Why are x-rays required before PRP therapy?

It is critical that a proper diagnosis is made prior to performing PRP. This is to ensure that your pet is a good candidate for the therapy before investing in it and to make sure there are no other abnormalities present. Bone and joint cancer can present with the same clinical symptoms as osteoarthritis and this is where x-rays will help rule this out. As we do not know the effects on cancer cells with PRP, PRP therapy is presently contraindicated in patients with bone, joint or tendon cancer. X-rays help us evaluate the joints. In some cases, ultrasound and/or joint fluid analysis may be recommended prior to therapy.

Can osteoarthritis be cured?

No. Osteoarthritis is a chronic condition however it can be successfully managed in most patients.

Once my pet has been determined to be a good candidate for PRP, how is the treatment scheduled?

Your pet will come in to the hospital and a blood sample will be collected. The blood will be processed to isolate the platelets and the plasma. This takes about 20 minutes. Your pet will be sedated and the region(s) to be treated will be prepared by clipping the fur and cleansing the skin. The veterinarian will then inject the region(s) to be treated. Once your pet is up, they will be able to go home. Your pet will be prescribed pain medications to be given a few days afterwards. Some discomfort a few days after the treatment can be expected in some patients which is normal.

When can I expect to see the results of PRP?

Some patients will improve in a few days, but it is recommended to wait 2 weeks before assessing response to treatment. A recheck appointment will be set up after treatment to re-evaluate your pet and is included in the cost of the PRP.

What happens if we do not see a positive response to treatment?

Most patients will have a positive response within two weeks. Patients with severe osteoarthritis may require a second treatment which is safe to administer after two weeks.

Is PRP therapy guaranteed to work in all patients?

We can not guarantee that PRP will work in all patients. PRP works in the majority of patients that it is given to however there is a small proportion where it may not work or work as well as expected. Some patients may require two treatments two weeks apart. PRP has been proven to be a very effective therapy, but like with many types of treatment, not all patients will respond the same way.

How long will PRP therapy last?

Many veterinarians note therapeutic effects last between 6-12 months for dogs with mild to moderate osteoarthritis. Treatments can be repeated as needed and may be desired over using long term pain medications.

How is the cost of PRP therapy compared to other treatments for osteoarthritis?

Initially, a proper diagnosis must be made therefore x-rays or other tests may be recommended prior to booking PRP to ensure your pet is a good candidate. Once a proper diagnosis is established, then we will be able to give an estimate. PRP therapy can be the same or even less costly than the cost of giving daily medications over several months as PRP typically lasts 6-12 months. We will be able to formulate an estimate more specifically once we have a diagnosis and whether or not 1 or 2 treatments will be anticipated.

Is PRP considered the best way to currently treat pain from arthritis and joint disease in pets?

There is no one magic bullet and PRP is just one of many tools we have to treat joint disease. The treatment of osteoarthritis and joint disease requires a multi-modal approach where diet and weight management, exercise, rehabilitation, PBMT (aka Laser therapy) and joint supplements and medications may be part of the treatment. Each treatment plan must be tailored to the specific patient.

I think my pet may be a good candidate for PRP therapy so what's next?

If your pet has not already been assessed by one of our veterinarians, please call the office 705 446-0261 to set up an appointment. We are here to answer all of your questions and to help you to determine if PRP therapy is right for your pet! For more information, a very informative video is available at https://www.youtube.com/watch?v=4wNuz2Xqd30