

## Valley Veterinary Surgery

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NEWSLETTER

Spring 2014



### Platelet Rich Plasma (PRP)...

We have been using platelet rich plasma (PRP)(ACP System, Arthrex) as part of our surgical protocol for 18 months. We retrospectively analyzed our data for the first year using PRP, including all patients who received cruciate ligament repair surgery using an implant (usually a Tightrope, ie Fibertape, or a Fiberwire and anchor system). The PRP was prepared according to standard protocols using an Arthrex ACP centrifuge system. The PRP was administered intra-articularly at the very end of surgery. Typically we injected 1-3mL of the product and it was assumed to leak out of the joint and into the surgical site thru the scope portals. All patients were monitored for signs of infection for at least 12 weeks post op.

During the one year study period there were no infections in 168 cases. We then analyzed our infection rate for the two years prior to the study and we determined the infection rate for that time period was 4.2%. Comparison of these two groups showed a statistically significant reduction in the infection rate when PRP was added to the protocol ( $p$  value  $< .008$ ). We are preparing a white paper on this study that we will be including in a future newsletter.

There have been numerous human studies demonstrating lower infection rates and faster healing of bone tunnels using PRP, references are in the enclosed brochure. ACP is a specific type of PRP product. PRP is a concentration of platelets and growth factors which improves signaling and recruitment of cells to an injury site to optimize healing. It is a very simple and cost effective technique. There is a special double syringe system to maintain a sterile product. We draw the sample at induction of anesthesia and process during the surgery. Another potential advantage of the PRP post operatively is pain reduction, which has been validated in people. Since it is the patients own blood products there is very little concern for side effects.

We have less experience, and less success, treating OA or other chronic conditions using PRP. The beneficial effects for arthritic joints seem to be very brief in canine patients. There is strong evidence for improved healing of torn tendons, muscles and

fractures and we have had success treating non-unions conservatively with PRP injections into the fracture site. PRP is also being used in almost any inflammatory or surgical situation you can imagine.



## Update on Meniscal Management

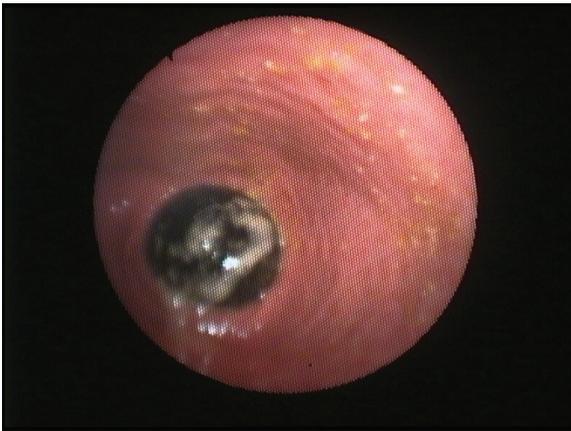
We have now been releasing virtually every medial meniscus for over a year based on studies proving pathology in the meniscus very early in the course of cruciate ligament disease. This pathology is not seen with the naked eye, and may only be noted as a soft meniscus with probing at arthroscopy. When analyzed with histopathology these tissues have substantial damage. Evidence continues to accumulate that the rate of meniscal tearing after cruciate repair surgery is very high, and we regularly perform arthroscopy to treat meniscal injuries after a successful stabilization at other facilities. The bottom line is that the meniscus CANNOT be accurately evaluated using arthrotomy and normal vision, even with an ocular loupe. Many tears are not full thickness and originate on the bottom of the meniscus. Even without visible tears the pathology is present, but only visible with a microscope as the early damage is interstitial (interstitial tears with no visible surface changes are well documented in people using MRI). The negative effects of releasing the meniscus (while proven in bipeds, they are still only theoretical in quadrupeds) seem to be greatly outweighed by the beneficial effects. Meniscal injuries are painful, and rubbing of the torn meniscus on the articular cartilage is damaging. Meniscal release has not proven to be as detrimental as was assumed based on the human experience. We believe meniscal releases have greatly reduced the number of second surgeries for a torn meniscus, AND it has improved the functional outcomes of our patients (ie they do better with release!)

## More is better...

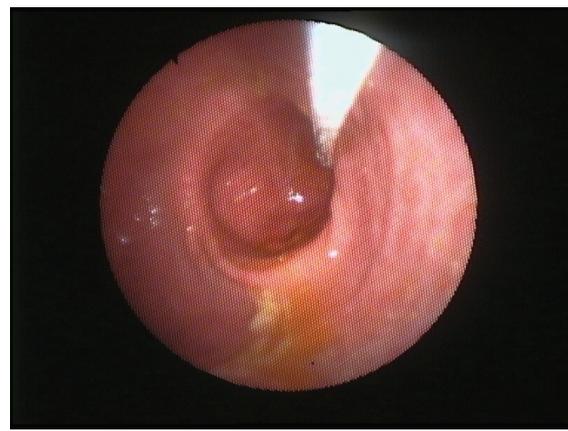
A recent article in Vet Surg (August 2013) reported on the use of minimally invasive surgery (MIS) in veterinary practices. A survey of all ACVS Diplomats indicated an average MIS caseload of less than 30 per year for small animal surgeons. The article discussed the slow incorporation of MIS in veterinary practice despite the well-documented advantages and the nearly complete incorporation on the human side. We couldn't agree more, which is why I performed over 225 MIS cases last year.

In addition to arthroscopy, by far our most common procedure, we offer a full range of minimally invasive techniques including: **Flexible GI, Laparoscopy, Thoracoscopy, Cystoscopy (with stone removal in many female dogs), Rhinoscopy, Bronchoscopy, and Otoscopy.**

Please call if you would like to discuss a case that might benefit from minimally invasive surgery. If email is more convenient, email us questions, radiographs, and consultation related information at [Valleyveterinarysurgery@gmail.com](mailto:Valleyveterinarysurgery@gmail.com).



Ball caused vomiting for 7 years!



Pyloric antrum after removal of ball

## Specialty Services Offered

### Arthroscopy

CCL/Meniscal Treatment

Elbow

Shoulder

### Endoscopy

### Laparoscopy

### Thoracoscopy

### Cystoscopy

### Bronchoscopy

### Rhinoscopy

**Thank you for your referrals! Please call with any questions.**

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