



## Puget Sound Veterinary Referral Center, PLLC Soft Tissue and Orthopedic Surgery Service

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### **Arthroscopy**

Small animal arthroscopy has become a common diagnostic and treatment option available for the small animal veterinarian since the mid 1980's. Advantage of arthroscopy when compared to open arthrotomy has to do with its minimally invasive application. A thorough inspection can be made of the joint and the magnification provided by the camera allows for accurate diagnosis of cartilaginous and other intra-articular pathology. In addition, instruments, including probes, shavers and burrs, allow for treatment as warranted. Synovial and cartilaginous changes as well as early tendon tears are readily appreciated when using arthroscopy and these changes are typically not appreciated with the naked eye. Post operative pain is typically decreased compared to open surgery and return to function is fast. Disadvantages include cost and care of the instruments as well as the experience required. The equipment can prove to be prohibitive to many clinics and the instruments are easily damaged if not cared for properly. Arthroscopy has a steep learning curve and requires practice in order to be able to instrument and triangulate appropriately and provide the treatment needed. Ultimately, experience will lead to decreased risk of iatrogenic injury and quicker procedures.

Standard orthopedic patient preparation is utilized and strict adherence to sterile techniques is followed. Intra-articular analgesia (Bupivacaine 2 mg/kg total dose), in addition to local nerve blocks and epidural analgesia, is commonly used. Prior to insertion of the arthroscopy, the joint is distended with crystalloid solution to enlarge the joint space. Following joint distension, the arthroscope cannula is inserted with a blunt trocar which is then withdrawn to allow for arthroscope to be introduced. Once accurate placement has been verified, the lavage flow is started and an egress site is established. An 18-gauge needle is most commonly used. The joint is then thoroughly explored and additional procedures are performed as indicated.

Arthroscopic evaluation and treatment of the elbow, shoulder and stifle is commonly performed. Arthroscopy of the elbow is an excellent way to diagnose and treat disorders such as medial coronoid disease and osteochondritis dissecans. There is no literature documenting a difference in lameness after arthroscopy versus arthrotomy but the benefits of arthroscopy of the cubital joint include excellent exposure of the joint and decreased post operative morbidity. Bilateral arthroscopy is commonly performed and generally well tolerated by the patient. Indications for arthroscopy of the shoulder joint include osteochondritis dissecans and tendinopathies, including biceps tenosynovitis and subscapularis tendon tears. Bilateral treatment can be done without problems for the patient and visualization is excellent with minimal trauma. Stifle arthroscopy allows for detailed evaluation of the meniscus, the cranial and caudal cruciate ligaments as well as osteochondritis dissecans lesions on the femoral condyles.

In addition to the elbow, shoulder and stifle joints, arthroscopy can be performed on the hip, hock and the radiocarpal joint. With regards to the hip joint, arthroscopy provides an excellent opportunity to screen the joint for arthritis prior to performing a TPO procedure. The main indication for hock arthroscopy is osteochondritis dissecans of the talus. Arthroscopy of the radiocarpal joint is rarely performed in dogs but evaluation of the articular cartilage and biopsies can be performed this way.

Please do not hesitate to call the Puget Sound Veterinary Referral Center if you have questions regarding a case or have a patient that could benefit from arthroscopy.