



OSTEOCHONDRAL AUTOGRAFT TRANSFER SYSTEM (OATS)



Figure 1: OCD Lesion

Sam is a 9 month old, male Labrador retriever with a 4-week history of right front lameness.

Sam's intended purpose is as a loving family pet as well as a bird dog. On physical examination, Sam had grade 3/5 right front lameness. Pain was present on elbow extension and flexion and moderate joint effusion could be palpated. Radiographs obtained under sedation revealed right sided mild osteoarthritis and a lucent area within the distal aspect of the medial portion of the condyle (**figure 1**). The left side appeared normal.

Based on these findings a tentative diagnosis of Osteochondritis dissecans (OCD) was made. Arthroscopy of the left elbow revealed a small fragmented medial coronoid process that was removed using a mini curette. Arthroscopy of the right elbow revealed a large osteochondral flap (**figure 2**) with a corresponding kissing lesion on the medial coronoid process. Following flap removal a large defect remained (**figure 3**).

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**OSTEOCHONDRAL
AUTOGRAFT TRANSFER
SYSTEM (OATS)**

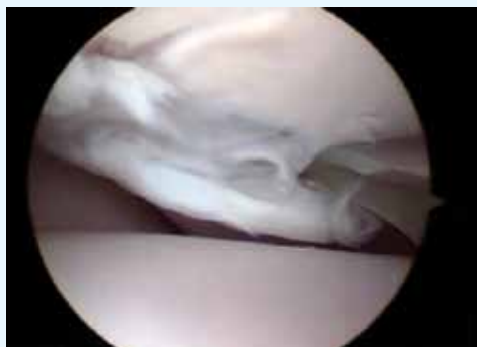


Figure 2: OCD Flap



Figure 3

Next, medial approaches were made to the right elbow and stifle joints. Two eight mm holes were drilled into the existing humeral defect (**figure 4**) and two, eight mm osteochondral grafts were obtained from the stifle joint (**figure 5**). The osteochondral grafts were implanted into the corresponding holes (figure 6). The surgical kit enabling this procedure is manufactured by Arthrex and is called Osteochondral Autograft Transfer System (OATS). The acronym OATS is often used synonymously with the surgical procedure.

The elbow and stifle joints were closed routinely. Sam was kept in ICU for one night and discharged the following day. The owner was asked to keep Sam quiet with leash walks only for one month. At one month, radiographs of the right elbow revealed incorporation of the graft into the surrounding bone. Sam had improved but he still had grade one, right front lameness. However, eight weeks following surgery Sam had no evidence of lameness.

The differential diagnosis for young sporting breed dogs that present with front limb lameness includes elbow dysplasia, panosteitis, ununited anconeal process and OCD of the shoulder or elbow. The radiographic findings in this case revealed a fairly obvious OCD lesion in the right elbow joint and radiographs of the left side were normal. The radiographic OCD lesion could have easily

been missed but having OCD in the differential diagnosis encouraged close observation. The small void or divot involving the medial aspect of the humeral condyle is characteristic. The fact the left elbow radiographs were normal, but a fragmented medial coronoid process was present, illustrate the value of arthroscopy.

Prognosis for patients with OCD depends primarily on the location of the lesion. Dogs with shoulder OCD have a good prognosis with flap removal and micro fracturing (taping small holes in the defect using a arthroscopic pick to access underlying blood supply). However, patients with OCD of the stifle, elbow or tarsus have a relatively poor prognosis with flap removal and micro fracturing alone. Osteochondral transfer has been an extremely valuable new treatment modality used in our practice on most OCD lesions of the stifle and elbow. This system and procedure has changed this once debilitating disorder into a very treatable condition with good to excellent surgical outcomes.

If you would like to discuss OCD, OATS or any other canine orthopedic or spinal case please contact us.

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Figure 4



Figure 5

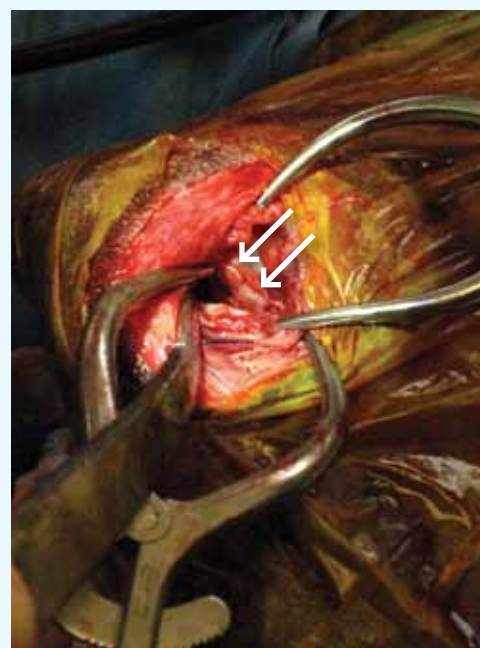


Figure 6