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“Sadie” - DARthroplasty for Hip Dysplasia



“Sadie”

“Sadie” is an 8-month-old spayed female yellow Labrador Retriever. She came to us with a complaint of rear leg stiffness and an abnormal gait, especially when she ran. Our examination revealed marked hip joint laxity with marked subluxation (partial dislocation) of both hips. The right hip was worse. This is an example of hip dysplasia where the acetabulum (hip socket) does not form normally, is not very deep, and does not provide adequate bony coverage of the femoral head (“ball” portion of the hip “ball and socket” joint). [Click here for more on hip dysplasia.](#)

When the degree of subluxation and degenerative arthritic changes are minimal, a triple pelvic osteotomy (TPO) is indicated. In a TPO, the pelvis is cut in three places to free up the acetabular portion of the hip joint, then rotated and “stair-stepped” laterally with a plate to capture the femoral head under acetabular bone (see Part 7 of the above web link). In Sadie’s case, her acetabulae were extremely shallow (filled with bone) and the femoral heads were markedly subluxated.

Another option for Sadie would have been an artificial hip joint. However, they are very expensive and it is not usually a good idea to implant one in a dog as young as Sadie. This was not a viable option for Sadie. Instead we performed a procedure called a DARthroplasty (DAR stands for Dorsal Acetabular Rim).

In a DARthroplasty, corticocancellous bone strips are harvested from the wing of the ilium (the pelvic “wing”) and contoured and sutured to the hip joint capsule at the level of the middle dorsal (upper) femoral head at its maximal point of subluxation out of the acetabulum. The strips are covered with additional cancellous bone graft. The graft eventually consolidates into a solid new bone “roof” for the femoral head. The new dorsal acetabulum attaches to the old dorsal acetabular rim via drill holes in the original acetabular rim.

Four weeks after the DARthroplasty surgery, Sadie is using her right rear leg with only minimal lameness. She is a VERY ACTIVE pup. We anticipate performing a DARthroplasty on her left hip in the next few months.