Baker’s cyst and medial meniscus tear: is there a direct correlation?

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Objective: To determine the correlation between posterior horn medial meniscus tears and Baker’s cysts. Materials and Methods: Retrospective review of 276 knee MRIs by two musculoskeletal radiologists. Results: There were 83 patients (30%) with medial meniscal tear and Baker’s cyst. There were 148 patients (54%) with medial meniscus tear without Baker’s cyst and there were 45 patients (16%) with Baker’s cyst but no meniscus tear. Conclusion: Baker’s cysts are associated with posterior horn medial meniscus tears less than half the time.

An association between Baker’s cysts and meniscal tears is well known. However the criteria used in the past for each entity have been somewhat variable and some have claimed that the two are seen together, almost always. Since that was not our general feeling in day-to-day practice, we set out to determine the frequency of Baker’s cyst occurring together with posterior horn medial meniscus tears at our institution using strict criteria.

From the databases of two hospitals, all knee MRI cases with a Baker’s cyst or medial meniscus tear were retrospectively reviewed by two musculoskeletal radiologists. From a one and one-half year time period, 276 cases were identified. All knee MR imaging exams were done with 1.5 Tesla magnets utilizing sagittal T1-weighted sequences, coronal FSE proton density and inversion recovery as well as axial FSE proton density and T2-weighted sequences. The criteria for diagnosis of meniscus tear were abnormal signal extending to the femoral or tibial surface or to the free edge and/or abnormal size or shape of the meniscus. A Baker’s cyst was diagnosed when a fluid collection was present between the medial head of the gastrocnemius muscle and the semimembranosus tendon. Clear definition of a neck of the cyst extending back to the joint was not required.

There were 83 patients (30%) with posterior horn medial meniscus tear and an associated Baker’s cyst. There were 148 patients (54%) with posterior horn medial meniscus tear without an associated Baker’s cyst. There were 45 patients (16%) with a Baker’s cyst but no tear of the posterior horn of the medial meniscus. There was no difference in the average size of the Baker’s cyst in any of the three groups. There were no differences in average patient age or other patient demographics amongst any of the three groups.

Although Baker’s cysts are not uncommon in association with a tear of the posterior horn on the medial meniscus (30% in our study), medial meniscus tears occur more frequently without an associated Baker’s cyst in our patient population. Our definition of medial meniscus tear and Baker’s cyst seems to be more restrictive than those of previous authors [1] but they are certainly in keeping with most generally accepted definitions.

The presence of a Baker’s cyst should make one examine the posterior horn of the medial meniscus carefully for a tear but there is not a direct correlation between the two entities in our experience.