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Introduction
Rapidly-Progressive osteoarthritis (RPOA) is defined as a loss of greater than 2 millimeters or 50% of joint within 12 months. Intra-articular local anesthetic and steroid injection is sometimes prescribed for management of osteoarthritis of the hip. While a causal relationship between steroid injection and RPOA has not been established, concerns exist regarding the potential risk of chondrolysis in patients who receive local anesthetic or steroid injections. The purpose of this study is to assess the incidence of RPOA in patients who receive intra-articular hip injections.

Methods & Materials
After Institutional Review Board approval, coding records from 2000-2013 were used to identify all subjects who had intra-articular hip injection. Subjects with diagnoses other than osteoarthritis and those without 12-month post-injection radiographs were excluded. Local anesthetic and steroid doses were recorded. Kellgren-Lawrence [1] grading was applied to baseline and follow-up images. Additional demographic and clinical and laboratory data was compiled for subjects meeting criteria for RPOA including whether they underwent total hip arthroplasty during the study period.

Results

**Expected Course -- Patient B**
- Prior to Right Intra-articular Injection (Kellgren Lawrence=1)
- Post-Right Intra-articular Injection (Kellgren Lawrence = 1)

**Rapidly Progressive Osteoarthritis -- Patient A**
- Prior to Left Intra-articular Injection (Kellgren Lawrence=3)
- Post-Left Intra-articular Injection (RPOA) (Kellgren Lawrence = 4)

Strict inclusion criteria limited the 1953 reviewed cases to a sample of 109 subjects. From this sample, 23 cases of RPOA were confirmed—representing a 21% incidence of RPOA in those receiving intra-articular anesthetic and steroid hip injections. Reasons for non-inclusion were varied and are illustrated to the right.

Of the 23 patients that developed RPOA, 21 (91%) received Total Hip Arthroplasties (THA). In the case of the 86 patients that received injections and did not go on to develop RPOA, 48 (56%) went on to receive a THA.

Conclusions
Based on strict inclusion criteria, 109 patients were eligible for analysis in this study. Of these patients, 23 developed RPOA—representing an incidence of 21%.

Future studies of larger sample size that also include outcomes of patients who did not receive intra-articular injections will be needed to establish a causal relationship between these injections and RPOA.

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References