

Hip Steroid/Anesthetic Injections: Is there an Increased Incidence of Hip Osteoarthritis Progression, Femoral Head Osteonecrosis and Collapse?

Wednesday 11:30-11:40 AM | SSK13-07 | Room: E353C

PURPOSE

To evaluate incidence of osteoarthritis progression, femoral head osteonecrosis and articular surface collapse in hip steroid/anesthetic injection patients.

METHOD AND MATERIALS

Our study was IRB-approved and HIPAA compliant. A total of 123 hip steroid/anesthetic(40 mg triamcinolone, 4 mL 0.5% preservative free ropivacaine) injections were performed from 01/2014 to 07/2015. Inclusion criterion was follow-up radiography of the native hip 3-9 months after the injection. Two musculoskeletal radiologists performed retrospective, blinded reviews of the pre- and post-injection radiography of hip injection patients (HIPs) and 2 demographic and follow-up duration matched control groups: 1, patients undergoing hip x-rays without injection; 2, glenohumeral joint injection patients. Groups were compared with Fisher exact test.

RESULTS

There were 102 HIPs (age 65 ± 13 (range 19-92) years; 62 F, 40 M; 41 L, 61 R), who were followed for 26 ± 10 (12-66) weeks. For Reader 1, 38/102 (37%) of HIPs had increased osteoarthritis after steroid injection, compared with 27/102 (26%) of hip controls and 14/44 (32%) of shoulder injection patients. For Reader 2, 42/102 (41%) of HIPs had increased osteoarthritis after steroid injection, compared with 20/102 (20%) of hip controls and 10/44 (23%) of shoulder injection patients. There was no significant difference between these groups ($P > 0.05$). For Reader 1, 24/102 (24%) of HIPs had new osteonecrosis and 15/102 (15%) had new collapse after the steroid injection, compared with 9/102 (9%) and 4/102 (4%) of hip controls and 2/44 (5%) and 1/44 (2%) of shoulder injection patients. There was significantly more osteonecrosis and collapse in HIPs, compared with hip controls ($P = 0.001$ and 0.01) and shoulder injection patients ($P = 0.005$ and 0.04). For Reader 2, 22/102 (22%) of HIPs had new osteonecrosis and 17/102 (17%) had new collapse after the steroid injection, compared with 9/102 (9%) and 4/102 (4%) of hip controls and 2/44 (5%) and 1/44 (2%) of shoulder injection patients. There was significantly more osteonecrosis and collapse in HIPs, compared with hip controls ($P = 0.01$ and 0.01) and shoulder injection patients ($P = 0.03$ and 0.005).

CONCLUSION

Hip injection patients have a greater incidence of osteonecrosis and collapse compared with hip controls and shoulder injection patients.

CLINICAL RELEVANCE/APPLICATION

Further evaluation of hip injectates and the injection population is warranted, given these findings.