Poster 192
Determination of Ultrasound-Guided Intraarticular Hip Joint Injection Accuracy with Cadaver Dissection.

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Disclosures: L. Batlle, No Disclosures: I Have Nothing To Disclose.
Objective: To evaluate the accuracy of ultrasound-guided intra-articular hip injections with the use of an oblique, long axis view approach while confirming visual assessment in an embalmed cadaver model.
Design: Single-blinded, prospective study.
Setting: Cadaver laboratory at a medical academic institution
Participants: Nineteen hips chosen from ten formaldehyde preserved cadavers.
Interventions: An ultrasound examination of the hip was performed on a randomized sample of nineteen cadaver hips. Hip specimens without any obvious signs of trauma, deformities, surgeries, or intra-articular abnormalities were included. After proper identification of the femoral head-neck junction in the long axis view, a colored latex solution was injected into the anterior synovial recess between the head of the femur and the femoral neck. The specimens were then dissected, and the distribution of the latex was graded for accuracy of the intraarticular injection by three independent observers.
Main Outcome Measures: Three separate categories were used to define the accuracy of the latex injectate: "Accurate" with no signs of latex observed outside the joint, "Partially Accurate" with some of the latex observed to have extravasated to the surrounding tissue, and "Inaccurate" whereby none of the injectate entered the joint. The consensus between two out of three evaluators was considered the final rating.
Results or Clinical Course: The percentage of "Accurate" injections was 79%. The percentage of "Accurate" and "Partially Accurate" injections was 89.4%. The "Inaccurate" injection percentage was 10.5%. The location of inaccuracy was noted to be in the iliopsoas bursa. In addition, solidified injectate was also noted to course anteriorly and inferiorly along the posterior aspect of the iliopsoas muscle, and anterior to the hip joint.
Conclusions: Ultrasound-guided intraarticular hip injections could be considered a feasible approach for intraarticular hip joint injections. Ultrasound injections are safer to both the patient and the physician compared to fluoroscopy due to a lack of exposure to ionizing radiation. The procedure can be considered an accurate modality in providing corticosteroids or viscosupplementation for hip degenerative joint disease.

Poster 195
Use of a Novel Impact-Sensing Technology to Compare Head Impact Exposure Between Male and Female High School Ice Hockey Athletes: A Pilot Observational Study.

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Objective: To compare head impact exposure during sport participation between male and female high school ice hockey athletes using a novel impact sensing system.
Design: Prospective observational study.
Setting: Data were recorded during games and practices in the men's and women's ice hockey teams at a single high school during the 2012-2013 season.
Participants: 19 male and 14 female high school ice hockey players.
Interventions: A small inertial measurement unit (X-Patch, Seattle, WA) was affixed over the right mastoid process using double-sided adhesive.
Main Outcome Measures: The number and magnitude (peak resultant linear acceleration [g] and rotational acceleration [rad/s2]) of head impacts experienced during ice hockey participation as measured by an impact sensing adhesive patch affixed to the skin overlying the right mastoid process.
Results or Clinical Course: 4,711 impacts were recorded over 25 games and 51 practices (1,191 player-sessions) in the male athletes, while 1,045 impacts were recorded over 18 games and 18 practices (385 player-sessions) in the female athletes. Repeated measures ANOVA demonstrated significantly greater impacts per player-session in males (3.90 ± 4.61 impacts/session for males vs. 2.69 ± 4.00 impacts/session for females; $F=8.31$, $p<.001$) and during games (4.90 ± 5.01 impacts/session for games vs. 2.88 ± 4.01 impacts/session for practices; $F=102.78$, $p<.001$). Peak linear acceleration did not differ between genders ($F=1.48$, $p=.23$) or session types ($F=3.41$, $p=.07$). Peak rotational acceleration was also similar between the genders ($F=0.97$, $p=.33$), but greater during practices ($3,585 \pm 2,369$ rad/s^2) compared to games ($3,307 \pm 2,112$ rad/s^2; $F=13.69$, $p<.001$).
Conclusions: The results suggest male high school hockey players experienced significantly more head impacts than females, although the magnitude of head impacts experienced was similar between the genders. Impact counts were greater during games than practices for both genders, although peak rotational accelerations were slightly greater during practice sessions.

Poster 215
Can Fresh Osteochondral Allografts Restore Function in Juveniles With Osteochondritis Dissecans of the Knee?

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Disclosures: B. Curtin, No Disclosures: I Have Nothing To Disclose.
Objective: Failure of initial treatment for juvenile osteochondritis dissecans (OCD) may require further surgical intervention, including microfracture, autograft chondrocyte implantation, osteochondral autografting, and fresh osteochondral allografting. Although allografts and autografts will restore function in most