

Functional Outcomes Following Traumatic Hip Dislocation

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Purpose: Traumatic native hip dislocations are serious injuries that require immediate orthopaedic attention and have been associated with significant long-term morbidity. Previous studies have been published on radiographic outcomes and clinical complication rates; however, there are little data evaluating the effect of these injuries on patient-reported outcomes (PROs). The purpose of our study was to evaluate PRO scores among patients with native hip dislocations.

Methods: A retrospective review of our institution’s electronic medical record was performed using billing codes to identify patients with native hip dislocations between 2005 and 2020. Radiographic and chart review recorded injury pattern, duration of dislocation, and presence of avascular necrosis (AVN) or posttraumatic arthritis (PTOA) on last follow-up. Patients were administered the PROMIS (Patient-Reported Outcomes Measurement Information System) Physical Function (PF) and Short Form-36 (SF-36) via HIPAA-compliant electronic data capture. Outcomes were analyzed and compared between patients with and without AVN and PTOA using Student t-tests and Mann-Whitney U comparisons of means / medians. Floor and ceiling effects were also characterized for the various outcomes scores.

Results: Out of a total of 179 patients with native hip dislocation, 92 completed all PRO measures. For responders, mean age was 39.7 years (range, 15-76), mean body mass index (BMI) was 30.1 (14.6-43.6), and mean dislocation duration was 9.4 hours (0.6-22.8). No differences were found in responders vs nonresponders when looking at age, BMI, sex, dislocation duration, or PTOA. Only AVN displayed a significant difference between response to the survey (P = 0.026). A statistically significant difference was found between those with PTOA and those without PTOA on PROMIS PF and SF-36 Physical Function Scores. No difference was found in patients with or without AVN on PRO scores. Ceiling effects were exhibited in the SF-36 Bodily Pain (39.1%), Physical Functioning (30.4%), Role-Emotional (89.1%), Role-Physical (72.8%), and Social Functioning scores (63.0%). The percentage of ceiling effects for PROMIS PF was 0%.

Conclusion: Patients without PTOA exhibited higher PROMIS PF and SF-36 Physical Function scores highlighting that this complication after native hip dislocation is associated with a substantial impact on patient’s function. There was no demonstrated effect of AVN on PROs, possibly due to small sample size available for subanalysis. PROMIS PF notably was the only PRO tool without ceiling effects, rendering this an important tool in the evaluation of patients with traumatic native hip dislocation.

Table 1:

Mean Patient Reported Outcome Scores						
	AVN (n=10)	No AVN (n=82)	p-value	PTOA (n=21)	No PTOA (n=71)	p-value
PROMIS Physical Function	48.82	51.55	0.431	48.65	52.08	0.046 ^a
SF-36 Physical Function	81	82.9	0.301	81.43	83.34	0.037 ^b
SF-36 Role - Physical	80.94	80	0.781	78.57	82.04	0.596 ^b

a. Student’s t-test

b. Mann Whitney U test

See the meeting website for complete listing of authors’ disclosure information. Schedule and presenters subject to change.

POSTER ABSTRACTS