Revision Surgery for Instability following Total Hip Arthroplasty: Does Timing Matter?
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INTRODUCTION:
Instability is a common reason for revision surgery following total hip arthroplasty (THA). Recent data suggests that revisions performed in the early postoperative period are associated with higher rates of complications. The purpose of this study is to assess the effect of timing of revision for instability on the rates of subsequent complications.

METHODS:
The Medicare Part A claims database was queried from 2010-2017 to identify patients who underwent revision THA for instability. Patients were divided based on time between index and revision surgeries: < 1 month, 1-2 months, 2-3 months, 3-6 months, 6-9 months, 9-12 months, and >12 months. Patient demographics and complication rates were compared between groups using multivariate analyses to adjust for baseline demographics and comorbidities.

RESULTS:
Of 445,499 THAs identified, 9,298 (2.1%) underwent revision for instability. Revision THA within 3 months had the highest rate of periprosthetic joint infection (PJI): 14.7% at <1 month, 12.7% at 1-2 months, and 10.6% at 2-3 months vs. 6.9% at >12 months (P < .001). Adjusting for confounding factors, PJI risk remained elevated at earlier periods: <1 month (adjusted odds ratio [aOR]: 1.84, 95% confidence interval [CI]: 1.51-2.23, P < .001), 1-2 months (aOR: 1.45, 95% CI: 1.16-1.82, P 1/4 .001), 2-3 months (aOR: 1.35, 95% CI: 1.02-1.78, P 1/4 .036). However, revisions performed within 9 months of index surgery had lower rates of subsequent instability than revisions performed >12 months (aOR: 0.67-0.85, P < .050), which may be due to lower rates of acetabular revision and higher rates of head-liner exchange in this later group.

DISCUSSION AND CONCLUSION:
When dislocation occurs in the early postoperative period, delaying revision surgery beyond 3 months from the index procedure may be warranted to reduce risk of PJI.