

Review of Technique and Outcomes in Use of the Link MP Cementless Reconstruction Prosthesis in Revision Hip Arthroplasty

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Background:

The increasing demand for revision total hip arthroplasty (rTHA), particularly among younger patients with longer life expectancy, necessitates durable and versatile femoral implants. The Link MP modular fluted tapered stem offers distal fixation and modularity for complex reconstructions, but long-term outcome data remain limited.

Methods:

A retrospective review was conducted of 125 rTHA procedures using the Link MP stem at a single UK centre from 2011 to 2025. Demographics, operative details, complications, radiographic stem migration, and clinical outcomes were analysed. Kaplan-Meier survival analysis and descriptive statistics were employed to assess implant survivorship and functional recovery.

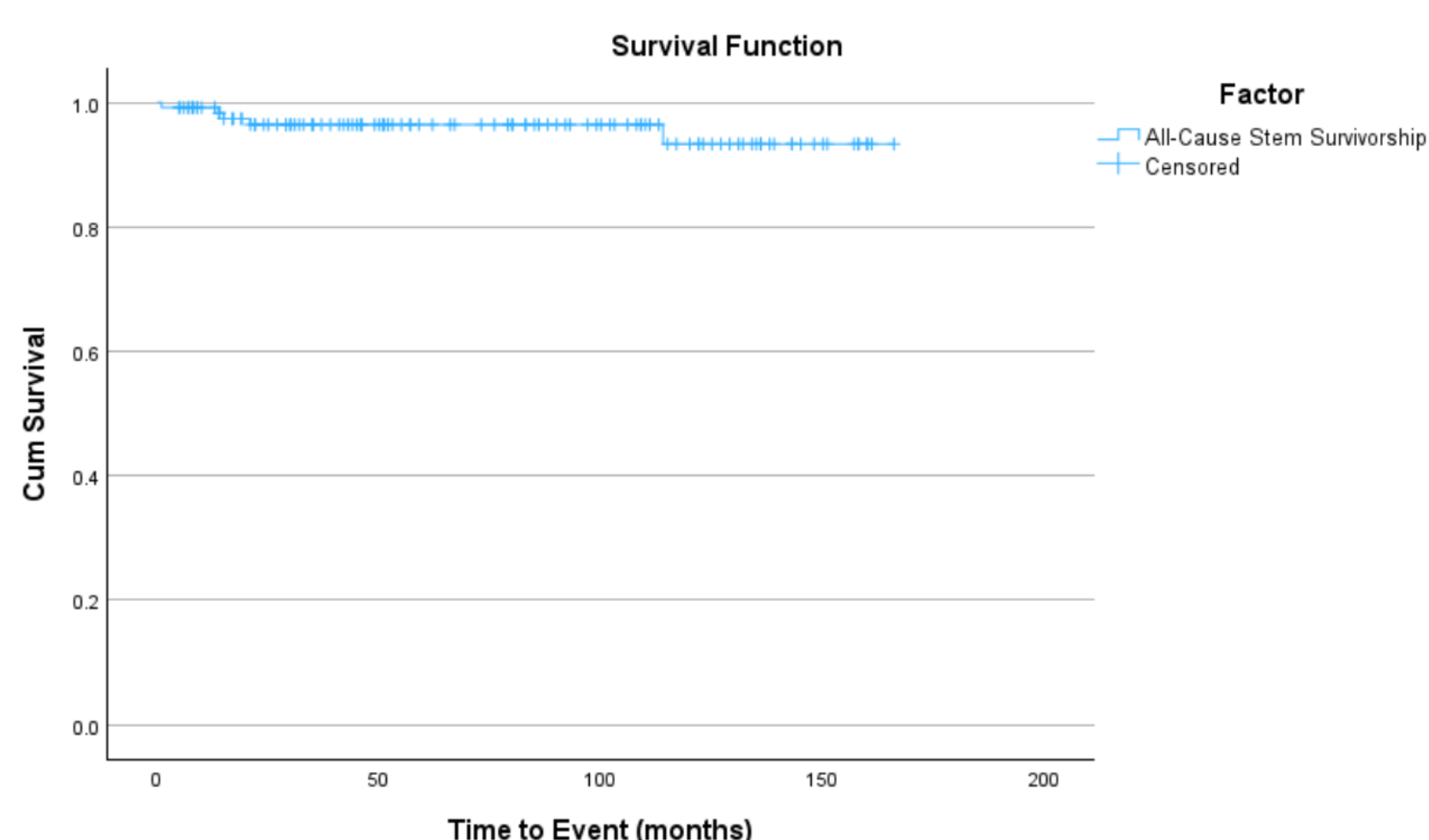


Figure 1. Kaplan-Meier plot of all-cause stem survivorship across the follow-up period. Death and loss to follow-up are censored.

Results:

Median follow-up was 57 months. Aseptic loosening was the primary revision indication (68%). Extended trochanteric osteotomy (56.8%) and femoral cortical windowing (28%) were common adjuncts, with 98.1% union rate. Median stem migration was 3 mm; 36% had >5 mm migration without correlation to reduced mobility ($p = 0.273$). Stem-related reoperation occurred in 4% of cases. Overall return to theatre was 9.6%. Kaplan-Meier analysis showed 96% stem survival at 166 months. Most patients (76.8%) returned to baseline mobility. Complication rates were low and comparable to existing literature.

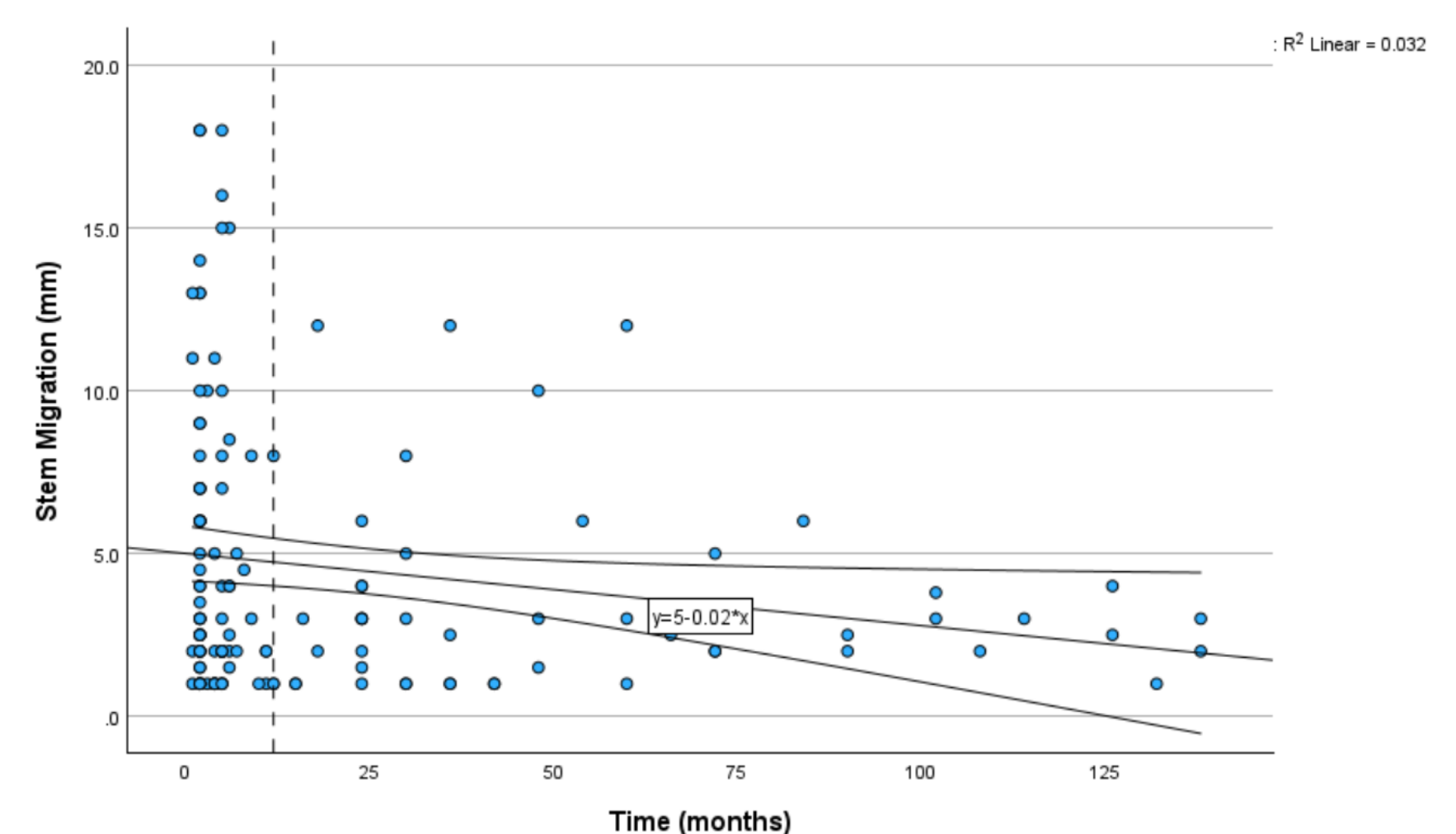


Figure 2. Scatter plot of measured stem migration. Stem migration was measured at first follow-up, and any subsequent measures at further follow-up were taken as a delta from the initial migration measurement. Line of best fit applied $y = 5 - 0.02 * x$ with confidence intervals marked at the mean of y . Dotted line marks 12 months post-surgery.

Conclusion:

The Link MP modular fluted tapered stem demonstrates excellent mid- to long-term survivorship, even in complex revision scenarios. Controlled early stem migration appears clinically benign. Mechanical complications at the modular junction were rare but warrant attention. This study supports the implant's reliability and provides technical insight into its use in revision hip arthroplasty.