Functional and Clinical Outcomes Following LARS ACL Reconstruction

Tulloch ST, Norsworthy CJ, Devit BM

Background and Aim

ACL reconstruction is one of the most commonly performed sports related surgical procedures. The Ligament Advancement reinforcement system (LARS®) is a synthetic device that has gained much recent interest and controversy worldwide as an alternate graft option to traditional autograft reconstructions. The aim of our study was to assess the functional and clinical outcomes of patients undergoing primary LARS ACL reconstruction in a large series of patients by a single surgeon at minimum 12 months and report on mid term failure rate at minimum 4.5 yrs.

Methods

Outcomes of 38 patients who underwent primary LARS ACL surgery by the senior author between March 2008 and April 2011 were assessed. 12 month follow up data was collected in our research laboratory. Patient reported outcome measures including the International Knee Documentation Committee score (IKDC), SF-36, return to sport and clinical outcomes including side-to-side difference on the KT-1000 arthrometer, single and cross hop tests were evaluated. All patients who required revision surgery subsequent to their 12 month follow up were identified.

Results

38 patients (22 men, 16 women) mean age 37 (range 19-58) completed a full set of 12 month clinical and functional outcome data. The mean IKDC score was 79 (40-97) and 24/38 patients had returned to sport at a mean 30 weeks from the time of surgery. KT-1000 measurement revealed a mean difference of 0.84mm (-2 – 8mm) to the non-operative knee. Single Hop distance symmetry was 88% and triple cross hop 90% compared to the non-operative knee. There were no re-ruptures prior to the 12 month evaluation, however since that review, 6/38 (16%) knees have subsequently required revision surgery for LARS failure.

Conclusions

Our results indicate the LARS ACL delivers promising outcomes at 12 months however there is a high rate of subsequent failure.