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Arthroscopic meniscectomy and meniscal repair: Comparison of clinical outcomes

Background: Meniscal tears are the most common injury in the knee, affecting 66/100,000 people per year. Surgical treatment includes arthroscopic meniscectomy or meniscal repair. Little is known regarding medium-term outcomes following these procedures in isolated meniscal tears. This study aims to quantitatively evaluate patients with meniscal tears, and those who have undergone meniscectomy and meniscal repair using validated patient reported outcome measures (PROMs), further exploring factors which affect surgical outcomes.

Methods: This observational study screened 334 patients who underwent arthroscopic surgery at South Tyneside Hospital since August 2013. 134 patients with isolated meniscal tears were invited to complete postal PROMs. A combination of patient notes and radiological imaging was used to collect information of interest including age, gender, knee-laterality, injured meniscus, tear pattern, procedure performed, complications, and associated injuries.

Results: A total of 115 patients (meniscal tear (n=36), meniscectomy (n=63), repair (n=16)) were included in the analysis with 96% successful PROM completion. Both meniscectomy and meniscal repairs (mean 55-months follow-up) showed better outcomes than patients with meniscal tears. Meniscal repairs demonstrated superior outcomes across all PROMs when compared to meniscectomy, with a greater mean overall KOOS score of 17.2 (p=0.009). Factors including higher pre- operative Kellgren-Lawrence Grade, pre-operative articular cartilage lesions and bilateral meniscectomies were shown to negatively influence outcomes.

Conclusions: Both meniscectomy and meniscal repair maintain clinical benefit at mean 55-months follow-up, affirming their use for treatment of meniscal tears. When feasible, meniscal repair should be performed preferentially over meniscectomy in isolated meniscal tears. Identified predictive factors allow adequate treatment stratification in specific patient groups.

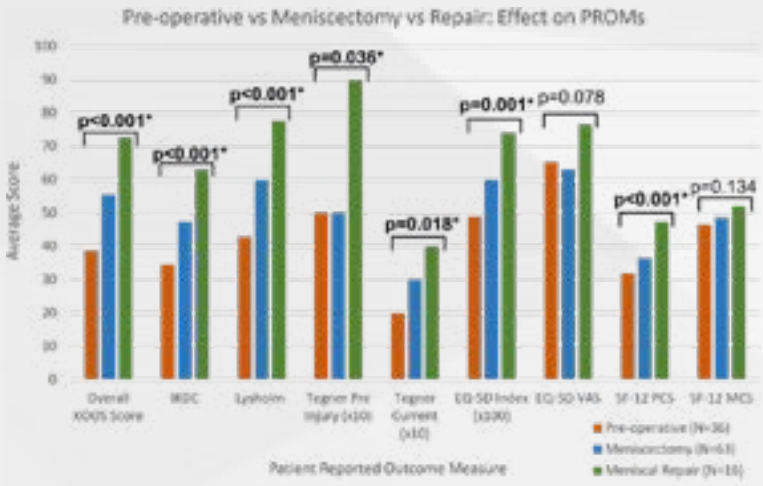

*Figure 8.2: Bar chart comparing PROM scores between the three groups. Welch 3-way test (Kruskal-Wallace rank sum test for Tegner). *Statistically significant at <0.05 level.*

Biography

James Jorge Bottomley is a final year medical student at Newcastle University who has just completed a master's degree in medical research (MRes) whilst being supervised by Mr Oday Al-Dadah, focussing on the comparison of clinical outcomes following different surgical procedures for meniscal tears in the knee. His analysis comparing meniscectomy and meniscal repair using multiple validated patient reported outcome measures aims to aid the creation of an improved treatment algorithm for these lesions, improving surgical outcomes. This project is the first comparing surgical treatment in isolated meniscal tears, providing a unique evaluation on this common injury.