**Introduction**

• Medial unicompartmental knee replacement (UKR) is an alternative to total knee replacement (TKR).
  • Advantages include better functional outcome and fewer complications
  • However, UKR has a higher revision rate
  • Revisions are often attributed to unexplained pain.
  • It is believed that unexplained pain improves in the first post-operative year.
  • This has not been demonstrated in a clinical trial.

**Aims**

• The aims of this study were:
  • to define the natural history of pain following UKR
  • to determine the factors affecting incidence of, and recovery from, postoperative pain.

**Patients and Methods**

• 183 patients (191 knees)
  • Medial UKR (Oxford UKR, Biomet, Bridgend UK)
  • Mean age 65.2 years (36.6–86.5)
  • 52% female
  • Patients were assessed with Oxford Knee Score (OKS):
    • Preoperative
    • Six weeks postoperatively
    • One year postoperatively
  • Patient factors were also recorded:
    • Age and Gender
    • Body Mass Index (BMI), in WHO categories
    • Surgeon grade – registrar, fellow or consultant

**Statistical Analysis**

• Patients were categorised according to the presence or absence of pain at 6 weeks and 1 year postoperatively.
• Pain was classified as ‘unexplained’ when no other cause was found (eg infection, trauma)
• Outcome measures:
  • OKS (absolute and change)
  • Pain score (OKS Questions 1, 4, 5, 8, and 9).
  • General pain question (Q1 of OKS)
    • ‘How much pain do you have from your knee?’
• Analysis:
  • ANOVA for OKS and pain score
  • Friedman test for OKS q1
  • Pearson correlation co-efficient for age, BMI
  • Chi squared test for incidence of pain in different subgroups
  • SPSS v20 used
  • significance set at  \( P < 0.05 \)

**Results**

• Good outcomes overall
  • At 6 weeks,
    • Severe pain in 7/191 knees (3.7%)
    • Moderate pain in 51/191 (27.2%).
  • At one year:
    • Severe pain in 6/191 (3.1%)
    • Moderate pain in 27/191 (14.1%).
    • 73/191 (38%) reported pain at either time point
    • Pain was unexplained in 56/73 (77%).

• Pain improved between 6 and 52 weeks (one way ANOVA, \( P < 0.05 \) for all comparisons) regardless of whether it was explained or not.
• The incidence of unexplained pain was unaffected by age, BMI or surgeon grade.
• Women were more likely to experience unexplained pain than men (Chi Squared test, \( p=0.02 \)).
• Neither age, gender, BMI nor surgeon grade affected the progression of pain beyond 6 weeks.

**Conclusions**

• Unexplained pain after UKR is likely to improve in the first postoperative year.
• Women are more slightly more likely to experience unexplained pain at 6 weeks.
• Neither age nor BMI affected the incidence of pain.
• Neither age, gender nor BMI affected the progression of this pain beyond 6 weeks.

**References:**