Continuous series of 42 TAAs, 60 TKAs, and 132 THAs

Jean-Luc BESSE
Marie-Caroline LOMBERGET,
M. BOURDIN, J. CHOUTEAU, M-H. FESSY

Department of Orthopaedic Surgery
and Sports Medicine,
Centre Hospitalier Lyon–Sud, Pierre-Bénite, France
Comparative analysis of functional results, quality of life, and sport activities, after lower limb joint replacement.

A continuous series of 42 TAAs, 60 TKAs and 132 THAs
People think

=> But no comparative studies analysed functional scores / quality of life / sport activities
Materials and methods

- **3 continuous series (THA / TKA / TAA)**
  - operated on from 2006 to 2011
  - **same inclusion criteria**:
    - one senior surgeon/joint, primary surgery, FU > 1yr
  - **same exclusion criteria**
    - Age>80yr, multiple arthroplasty, poly OA, component revision

- THA and TKA series were matched with TAA series for **same**: average follow up, mean operative age

- **Evaluation with**:
  - **Non-specific questionnaires**
    - Quality of life = SF-36, WOMAC, Bonnin’s Sports Questionnaire
  - **Specific questionnaires**
    - Ankle = AOFAS, FAAM / Knee = IKS function / Hip = Harris
Materials and methods

Inclusion criteria

Matched with TAR

42 TAA (40 patients)
Mean age = 60.4
FU = 35 months

60 TKA (47 patients)
Mean age = 68.3
FU = 31.4 months

132 THA (118 patients)
Mean age = 61.8
FU = 31.5 months

71 TAA

121 TKA

716 THA
### RESULTS: non-specific

<table>
<thead>
<tr>
<th></th>
<th>TAA</th>
<th>TKA</th>
<th>THA</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Response rate</strong></td>
<td>95%</td>
<td>87%</td>
<td>83%</td>
</tr>
<tr>
<td><strong>Satisfaction</strong></td>
<td>76%</td>
<td>85%</td>
<td>90%</td>
</tr>
<tr>
<td><strong>SF-36 Total</strong></td>
<td>59</td>
<td>56</td>
<td>65</td>
</tr>
<tr>
<td>Physical health</td>
<td>61.2</td>
<td>56.6</td>
<td>72.8</td>
</tr>
<tr>
<td>Mental health</td>
<td>59.7</td>
<td>59.3</td>
<td>66.3</td>
</tr>
<tr>
<td><strong>Sports capacities</strong></td>
<td>87%</td>
<td>74%</td>
<td>87%</td>
</tr>
<tr>
<td>(Bonnin)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Pain-free</strong></td>
<td>44%</td>
<td>67%</td>
<td>63%</td>
</tr>
<tr>
<td><strong>N sport activities</strong></td>
<td>3.3</td>
<td>1.9</td>
<td>2.5</td>
</tr>
<tr>
<td>/ patient</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
## RESULTS: specific score

<table>
<thead>
<tr>
<th></th>
<th>TAA</th>
<th>TKA</th>
<th>THA</th>
</tr>
</thead>
<tbody>
<tr>
<td>AOFAS</td>
<td>78</td>
<td>/</td>
<td>/</td>
</tr>
<tr>
<td>FAAM</td>
<td>55</td>
<td>/</td>
<td>/</td>
</tr>
<tr>
<td>IKS Function</td>
<td>/</td>
<td>73</td>
<td>/</td>
</tr>
<tr>
<td>Harris</td>
<td>/</td>
<td>/</td>
<td>88</td>
</tr>
<tr>
<td>Good to excellent results</td>
<td>60%</td>
<td>48.7%</td>
<td>78.3%</td>
</tr>
</tbody>
</table>

⇒ Sports activities were equivalent (gardening, cycling, swimming)
RESULTS: Statistical Analysis

Correlation between non-specific scores
- SF-36 / WOMAC: p<0.001, r= 0.714
- SF-36 / Bonnin: p=0.0026, r=0.22
- WOMAC / Bonnin: p=0.042, r=0.1457

=> All non-specific scores were correlated together

Specific scores
- Harris: ♀ results < ♂
- IKS function: influenced by BMI
- AOFAS (patient) ≠ AOFAS (surgeon) for pain evaluation

=> All specific scores were correlated to SF-36
DISCUSSION

- **Good response rate** with self-administered questionnaires

- **Weak points:**
  - Retrospective study
  - Short FU
  - TKA group older, with higher BMI

- **Satisfaction** *(Mancuso 1997)*
  - Subjective
  - Depends on surgery
  - Expectations
  - Patient knowledge

- **Excellent result ≠ very satisfied patient** *(Gravelleau 2003)*
In the literature

- **SF-36**
  - **TKA-THA**: best (♂), influenced by BMI (Zhang 2012)
  - **TAA**: not influenced by BMI (Baker 2009)

- **Specific Scores**
  - **AOFAS / FAAM**: pain evaluation ≠ patient vs surgeon (Cadenas 2011)
  - **IKS**: influenced by BMI and gender (Munzinger 2010)
  - **Harris**: influenced by BMI and gender (Zhang 2012)
CONCLUSIONS

- Best results for quality of life (*SF 36*) after THA
- Equal between TKA and TAA
- Less sport after TKA

**Specific Scores**
- All correlated to SF-36
- Not so good as non-specific scores

=> *Still work to do to improve specific scores*
REFERENCES


