Results of Delayed ACL Reconstruction More Than 10 Years Following Initial Trauma

Amirmohammad Navali, MD
Ali Naghiloo, MD

Tabriz University of Medical Sciences
Tabriz/IRAN
We have no financial conflicts to disclose.
Purpose of study

- Long lasting knee instability due to ACL tear increases the risk of meniscal and articular cartilage injury.
- Delay to surgery correlates with increased severity of injury and increased need for procedures in addition to ACL reconstruction.
- The purpose of this study was to assess the results of ACL reconstruction in patients with a delay of more than 10 years after ACL tear.
In a Prospective cohort study (Sep 2012 to Dec 2015)

43 patients (39 Male and 4 Female)

Mean age: 38 years (range: 31 to 54 y)

ACL reconstructions with a delay of more than 10 years after ACL tear
Method

- Lysholm, IKDC, and KOOS scores were recorded prior to surgery and at the final follow up.
- Tegner activity level score before and after injury and at the last follow up were recorded.
- Patients’ satisfaction VAS scores were recorded.
Method & Material

- The side to side difference in anterior translation of tibia was measured using:
  - KT 1000
  - A motorize arthrometer.
Method

Meniscal or chondral lesions were evaluated according to the patients’ arthroscopic records.

Kellgren and Lawrence system for classification of osteoarthritis of the knee was used and grade 3 and 4 patients were excluded from the study.
Results

- The mean **time interval** between primary trauma and ACL reconstruction surgery was 143 months (range: 123 to 216 months; **10 to 18 years**)

- Mean follow-up was 37 months (range: 24 to 67 m)
Results

- **Chondral lesion**: 39 cases (90.7%)
  - 19 cases of grade III/IV
  - 20 cases of grade I/II lesions.

- **Meniscal tear**: 35 patients (81.4%)
  - 21 cases of medial meniscus tear
  - 4 cases of lateral meniscus tear
  - 10 cases of combined medial and lateral meniscus tears.

- Only two cases (4.6%) had isolated ACL tear without additional meniscal or chondral lesions.
Results

- Mean KT-1000 arthrometer side-to-side difference was 3.7mm.
- Mean arthrometer side-to-side difference in 134 Newton posteroanterior force was 4.2mm.
Results

- Significant improvement was noticed in Lysholm, IKDC, KOOS and Tegner activity scores, and clinical pivot shift test.

- The mean Patients satisfaction VAS score was 7.9 out of 10.

<table>
<thead>
<tr>
<th></th>
<th>IKDC</th>
<th>LYSHOLM</th>
<th>KOOS</th>
<th>Tegner Activity</th>
</tr>
</thead>
<tbody>
<tr>
<td>Before Surgery</td>
<td>51.7±9.7</td>
<td>59.6±10.0</td>
<td>65±7.9</td>
<td>4.1</td>
</tr>
<tr>
<td>After ACLR</td>
<td>81±7.6</td>
<td>85±8.9</td>
<td>83±5.1</td>
<td>6.2</td>
</tr>
<tr>
<td>P value</td>
<td>&lt;0.001</td>
<td>&lt;0.001</td>
<td>&lt;0.001</td>
<td>&lt;0.001</td>
</tr>
</tbody>
</table>
Conclusion

- Long standing ACL tear *(more than 10 years)* leads to increased occurrence of meniscal and cartilage injuries.

- Delayed ACL reconstruction in patients without significant DJD can result in acceptable improvement in knee scores and patient satisfaction.
References


