THE STATE OF FLEXOR TENDON REHABILITATION IN THE EASTERN CAPE, SOUTH AFRICA

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WORLD FEDERATION OF OCCUPATIONAL THERAPY
MAY 2018

UNIVERSITY OF CAPE TOWN
IYUNIVESITHI YASEKAPA • UNIVERSITEIT VAN KAAPSTAD
Population Eastern Cape: 6.5 million
Catchment area: 1.4 million
Employed: 24%
Poverty stricken: 20.2%
12 years of schooling or more: 28.5%
No Schooling: 10.5%
isiXhosa: 77%
Afrikaans: 10.4%
English: 5.5%
SPECTRUM OF LITERATURE

African context

Epidemiological profile and incidence

1 RCT (Edingburg, 1987)

International Literature

Tendon anatomy, physiology and healing

Biomolecular agents

Surgical technique

Rehabilitation protocols

Close to 200 articles published year on year since 2011
CURRENT BELIEFS REGARDING BEST PRACTICE

Strong surgical repair

Active rehabilitation protocol

Greater intrinsic healing of the tendon
Greater tendon excursion and tensile strength
Earlier return to work
Better outcomes.

Best outcomes achieved:
71-75% good to excellent (Total Active Motion)
5% rupture rate
11% re-operation rate

But what is happening in South African Context?
DETERMINANTS OF POSITIVE FUNCTIONAL OUTCOMES AT 16 WEEKS AFTER FLEXOR TENDON REPAIR AT A TERTIARY HOSPITAL IN SOUTH AFRICA. A DESCRIPTIVE, ANALYTICAL STUDY.

THE EPIDEMIOLOGICAL PROFILE OF PATIENTS PRESENTING TO A TERTIARY HOSPITAL IN SOUTH AFRICA WITH FLEXOR TENDON INJURIES.

THE RATE OF RECOVERY BETWEEN 4, 8, 12 AND 16 WEEK POST OPERATIVE APPOINTMENTS FOLLOWING FLEXOR TENDON INJURY AT A TERTIARY HOSPITAL IN SOUTH AFRICA.
<table>
<thead>
<tr>
<th>Month/Time Period</th>
<th>Events</th>
</tr>
</thead>
<tbody>
<tr>
<td>Nov-Jan 2017</td>
<td>- Ethical approval obtained from UCT HREC</td>
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<tr>
<td></td>
<td>- Approval from National Health Research Database obtained</td>
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<td></td>
<td>- Approval from Hospital board obtained</td>
</tr>
<tr>
<td>Feb-March 2017</td>
<td>- Amendment made to recruitment source</td>
</tr>
<tr>
<td></td>
<td>- Ethical approval obtained</td>
</tr>
<tr>
<td>July 2017</td>
<td>- Recruitment ended (21 total participants)</td>
</tr>
<tr>
<td>December 2017</td>
<td>- Data collection ended (3 participants lost to follow up, 1 excluded)</td>
</tr>
<tr>
<td>March-April 2018</td>
<td>- Data analysis conducted</td>
</tr>
</tbody>
</table>
RESULTS: EPIDEMIOLOGICAL PROFILE

Average:
- Distance travelled: 22km
- Farthest distance travelled: 88km
RESULTS: INTERVENTION PROFILE

<table>
<thead>
<tr>
<th>COMPLEX INJURY</th>
<th>SIDE OF INJURY</th>
<th>EXPERTISE OF SURGEON</th>
<th>EXPERTISE OF THERAPIST</th>
<th>TYPE OF REHABILITATION</th>
</tr>
</thead>
<tbody>
<tr>
<td>9</td>
<td>Yes</td>
<td>10</td>
<td>10</td>
<td>13</td>
</tr>
<tr>
<td>8</td>
<td>Right</td>
<td>11</td>
<td>7</td>
<td>12</td>
</tr>
<tr>
<td></td>
<td>Left</td>
<td>Medical Officer</td>
<td>Registrar</td>
<td>EAM</td>
</tr>
<tr>
<td></td>
<td></td>
<td>7</td>
<td>2</td>
<td>&lt;1</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Medial Officer</td>
<td>Consultant</td>
<td>&lt;3</td>
</tr>
<tr>
<td></td>
<td></td>
<td>7</td>
<td>4</td>
<td>&lt;4</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Place and Hold</td>
<td>Passive flexion, active extension</td>
<td>5</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>Place and Hold</td>
</tr>
<tr>
<td></td>
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<td>1</td>
</tr>
</tbody>
</table>

Average

- Time to repair: 5.6 days
- Number of days with pain: 76
- Number of OT sessions post operatively: 8
- Number of OT sessions missed: 3
RESULTS: TOTAL ACTIVE MOTION (TAM)

<table>
<thead>
<tr>
<th></th>
<th>WEEK 4</th>
<th>WEEK 8</th>
<th>WEEK 12</th>
<th>WEEK 16</th>
</tr>
</thead>
<tbody>
<tr>
<td>Poor</td>
<td>30</td>
<td>26</td>
<td>22</td>
<td>17</td>
</tr>
<tr>
<td>Fair</td>
<td>3</td>
<td>3</td>
<td>5</td>
<td>6</td>
</tr>
<tr>
<td>Good</td>
<td>4</td>
<td>4</td>
<td>4</td>
<td>5</td>
</tr>
<tr>
<td>Excellent</td>
<td>4</td>
<td>3</td>
<td>2</td>
<td>4</td>
</tr>
</tbody>
</table>

Legend:
- Poor
- Fair
- Good
- Excellent
RESULTS: DISABILITIES OF THE ARM SHOULDER AND HAND (DASH)
RESULTS: MUSCLE STRENGTH

Kg/F

Week 12
Week 16

Participants
DISCUSSION AND CONCLUSION

TAM
- 71-75% good to excellent outcomes
- 31% good to excellent
- 16% fair
- 53% poor

DASH
- Mean Score 2.0
- SD 3.7
- Mean Score 13.33
- SD 19.5

Muscle Strength
- 85% Good to Excellent
- 12% Fair
- 3% Poor
- 5% Good to Excellent
- 21% Fair
- 74% Poor
ACKNOWLEDGEMENTS

American Hand Therapy Foundation: Burkhalter New Investigator Grant (2017)

For funding the cross-cultural translation of the Disabilities of the Arm, Shoulder and Hand questionnaire into isiXhosa.

REFERENCES