Effects of low-intensity pulsed ultrasound on recovery of physical impairments, functional performance and quality of life after total knee arthroplasty Protocol for a quasi-experimental study

By: Munajat, M; Munajat, Marvanja; Nordin, NAM; Nor Harndan Mohamad; Yahya, N; Yahya, N; Norriani M. Approach and Design: A quasi-experimental study comparing two approaches of physiotherapy, namely pulsed ultrasound added physiotherapy and conventional physiotherapy. Total number of participants with TKA required for this study will be calculated based on the result of a pilot study. Participants will be alternately allocated into either pulsed ultrasound-added physiotherapy group (low intensity pulsed ultrasound and conventional physiotherapy) or control group (conventional physiotherapy). Pulsed ultrasound-added physiotherapy group will receive low intensity pulsed ultrasound starting at post-operative day 2 (4 times for the first week after surgery and 2-3 times a week for a further 2 weeks). Both groups will receive conventional physiotherapy 4 to 5 times for the first week after surgery and 2 to 3 times a week for a further 11 weeks. This procedure and process will be tested and established in a pilot study. Primary outcomes of interest are pain level, swelling, active range of knee motion, and quadriceps strength. The secondary outcomes are functional performance and quality of life.

Discussion: This study will fill the gaps in knowledge relating the benefits of including low-intensity pulsed ultrasound into conventional physiotherapy for patients with TKA.

Keywords
Author Keywords: low intensity pulsed ultrasound; physiotherapy; total knee arthroplasty

Author Information
Reprint Address: Nordin, NAM (reprint author)

Addresses:
1. Univ Kebangsaan Malaysia, Ctr Rehab & Special Needs, Fac Hlth Sci, Physiotherapy Program, Jalan Raja Muda Abdul Aziz, Kuala Lumpur 50300, Malaysia
2. Int Islamic Univ Malaysia, Fac Allied Hlth Sci, Dept Phys Rehabil Sc, Kuantan, Pahang, Malaysia
3. Univ Kebangsaan Malaysia, Fac Med, Dept Orthoped & Traumatol, Kuala Lumpur, Malaysia
4. Int Islamic Univ Malaysia, Dept Orthoped Traumatol & Rehabil, Med Ctr, Kuantan, Pahang, Malaysia

E-mail Addresses: norazlin@ukm.edu.my

Funding

<table>
<thead>
<tr>
<th>Funding Agency</th>
<th>Grant Number</th>
</tr>
</thead>
<tbody>
<tr>
<td>Universiti Kebangsaan Malaysia</td>
<td></td>
</tr>
</tbody>
</table>

Publisher
LIPPINCOTT WILLIAMS & WILKINS, TWO COMMERCE SQ, 2001 MARKET ST, PHILADELPHIA, PA 19103 USA

Journal Information
Impact Factor: Journal Citation Reports

Categories / Classification
Cited References: 47

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