

ABSTRACT

BACKGROUND: Acute low back pain (LBP) is a common condition that is encountered by many physicians with varied treatments instituted in its management. Ultrasound physiotherapy is a common modality used in its management, although its effectiveness and its role in management of acute LBP is not well known. **METHODS:** A randomised controlled trial was conducted to compare the effect of the addition of ultrasound therapy to a defined analgesia protocol in patients presenting with acute LBP at the Aga Khan University Hospital, Nairobi. The main outcomes were reduction in disability and pain which were evaluated using the mean change in Oswestry Disability Index (ODI) and Visual Analogue Scale (VAS) score for pain, respectively. Patients were followed up for a minimum of four weeks with assessment using the ODI and VAS at weekly clinic visits. **RESULTS:** Seventy-four patients were included in the study. Thirty-six patients were allocated to the analgesia with additional ultrasound group and 38 to the analgesia alone group. The Minimal Clinically Important Difference (MCID) of 10% points at four weeks after initiation of treatment was achieved in the ultrasound group but not in the analgesia only group. This difference was not statistically significant though, 10.35% vs 8.44%; $p=0.36$. There was no difference in the mean change in the ODI score between the two groups at any of the four follow-up visits after initiation of treatment. Mean difference in change of ODI (95% confidence interval) was -3.2(-7.0 to 0.6) after the first week, 2.96(-1.3 to 7.2) after the second and 1.90(-2.3 to 6.1) after the third week, $p=0.36$, 0.17 and 0.096 respectively. There was also no difference detected in the mean change of VAS score between the two groups at the first and fourth visit. Mean difference in VAS between the first and fourth weeks was 0.2 with a 95% confidence of -0.85 to 1.2 ($p=0.72$). **CONCLUSION:** The addition of ultrasound therapy to the treatment of acute LBP improved patient outcomes as assessed by an MCID of a disability index, but which was not statistically significant. No outcome difference was noted in the two groups using the VAS pain score.