E-Poster

EP-157

Evaluation of Postural Balance in Patients Undergoing Total Hip Arthroplasty Using the Timed Up and Go Test (TUG)

Topic: Health Conditions (Nervous System, Musculoskeletal System, Cardiopulmonary System)

El Beloui Ryme, Kyal Nada, Boutalja Hasnaa, Lmidmani Fatima, El Fatimi Abdellatif

Physical Medicine and Rehabilitation, CHU Ibn Rochd, Casablanca, Morocco

BACKGROUND

Total hip arthroplasty (THA) is a surgical intervention aimed at alleviating pain and restoring functional mobility in individuals with hip joint degeneration. Assessing postural balance is a key aspect of patient management following THA, as it influences stability and mobility outcomes. This study aims to assess changes in postural stability in patients before and after undergoing THA.

METHODS

A prospective and descriptive study was carried out in the Department of Physical Medicine and Rehabilitation at the University Hospital CHU Ibn Rochd in Casablanca, Morocco. A total of 52 patients who underwent unilateral THA were recruited to evaluate postural balance before surgery, as well as at three and six months postoperatively. Assessments were conducted using the Timed Up and Go (TUG) test and the single-leg stance duration. Patients with bilateral THA, neurological conditions, or any disorder likely to interfere with balance control were excluded. Postoperatively, all patients followed a standardized rehabilitation program that included muscle strengthening and proprioception exercises.

RESULTS

The mean patient age was 59.6 years, with a predominance of male participants. All cases of THA were performed due to hip osteoarthritis. Significant improvements were noted in both the TUG test and single-leg stance duration across the different assessment periods.

- Pre-surgery: The average TUG test duration was 45 seconds, with 81.3% of patients relying on assistive devices. Single-leg stance was impossible for 37.2% of patients, while 62.8% could not exceed 5 seconds.
- Three months post-surgery: The average TUG test time improved to 21 seconds, with 48.3% still requiring assistive devices. Single-leg stance lasted on average 9 seconds.
- Six months post-surgery: The TUG test further improved to 17 seconds, and only 12.7% of patients still needed assistive devices. The single-leg stance duration increased to 12 seconds on average.

CONCLUSION

Our findings indicate that THA has an initial impact on postural stability, emphasizing the need for structured rehabilitation programs. The TUG test is a practical clinical tool for evaluating mobility, balance, and functional capacity. It provides essential insights into fall risk and the ability to ambulate without assistive devices.

Statement of Disclosures

None

Corresponding Author:
El Beloui Ryme
Physical Medicine and Rehabilitation, CHU Ibn Rochd, Casablanca, Morocco
Email: el.ryme@gmail.com

Doi: 10.5606/archisprm.2026.EP-157