

# POSTURAL BALANCE ASSESSMENT BEFORE AND AFTER UNILATERAL TOTAL HIP ARTHROPLASTY

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## Background and Aims

Total hip arthroplasty (THA) is a surgical procedure with the aim of relieving pain and restoring functionality in patients with hip joint degeneration. Postural balance assessment plays an important role in the management of patients with THA since it impacts patient's stability. The aim of this study is to evaluate postural stability in patients before and after THA.

## Methods

Prospective and descriptive study conducted in the department of Physical Medicine and Rehabilitation of university hospital « CHU Ibn Rochd » in Casablanca, Morocco. 38 Patients who underwent unilateral THA were recruited to assess postural balance before surgery, 3 and 6 months after THA using timed up and go test (TUG test) and time duration of single leg stance.

## Results

The mean age was 58.3 years old with a male predominance. All patients had THA after hip osteoarthritis. Significant differences were observed concerning TUG test and time duration of single leg stance before and after surgery. The average TUG test before surgery was 45 seconds with 78.9% using assistive devices. Single leg stance was impossible for 31.5% and lasted only <5sec for 68.4%. 3 months after surgery, the average TUG test was 23 seconds with 42.8 % still using assistive devices. Single leg stance lasted in average 8 sec. 6 months after surgery, the average TUG test was 16 seconds with only 10.5 % still using assistive devices. Single leg stance lasted in average 10 sec.

## Conclusion

In our study, TUG test combined with time duration of single leg stance showed that THA can initially affect patient's ability to maintain postural stability. Thus, patient must undergo a structured rehabilitation program where balance assessment is an important component in order to monitor patient's progress in restoring stability, and to provide valuable information about patient's risk of falling and to walk without any assistive devices

**Keywords:** Hip arthroplasty, balance, TUG test