

## **The Impact of the Cardiac Chair Position (CCP) on Day-1 Mobilization in Patients with Fragility Hip Fractures: A Cohort Study of 238 Patients**

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**Purpose:** The cardiac chair position (CPP) utilized in cardiac surgery aims to improve day-1 mobilization post-surgery. Our study aims to review the impact of the CCP in improving day-1 mobilization following hip fracture surgery.

**Methods:** This was a longitudinal cohort study over two 4-month, matched time points in 2019 and 2021. Consecutive patients >65 years old with a fragility hip fracture sustained following a fall from standing height admitted to 1 institution in whom complete data were available were included in the study. Exclusion criteria were patients who sustained high-energy trauma, and those who were day-1 postoperative over the weekend due to lower staffing levels. Routine audit personnel prospectively completed the Standardised Audit of Hip Fracture in Europe (SAHFE) form. The 2019 and 2021 cohorts contained patients not placed in CCP and placed in CCP, respectively. All patients had 2 physiotherapy sessions on day 1. We measured the following outcomes: placement of patients into CCP, achieving "bum off bed", reason for not mobilizing, transfer to chair, and standing. Statistical analysis was performed using unpaired t test.

**Results:** Complete data were collected for 238 patients representing 83.8% of the total patients screened. 112 patients were identified in the control group and 126 patients in the CCP group. There was no statistical difference in sex or abbreviated mental test (AMTS) between the 2 groups. The control group was significantly older (mean age 90.2 vs 84.1), had a greater Nottingham hip fracture score (NHFS), and better presurgery mobility than the CCP group. 85% of patients in the CCP group were placed into the CCP. Patients who were placed into the CCP had a significantly greater ability to get 'bum off bed' (76% vs 59%), transfer to chair (69% vs 36%), and stand (73% vs 54%) when compared to the control group ( $P < 0.05$ ). Patients placed in the CCP mobilized quicker and had less frequency of postural hypotension when compared to patients not placed in CCP (1.3 days vs 1.8 days,  $P < 0.05$ ) and 17% versus 23%, respectively.

**Conclusion:** CCP is a simple, no additional cost, and effective intervention which can be delivered by any health-care professional and can improve morbidity and mortality for patients with hip fracture.