

Predictors of Hip Fracture Mortality in Ghana: A Single-Center Prospective Study*Paa Kwesi Baidoo, MD; James Beguah Odei, PhD; Velarie Yaa Ankrah Ansu, MS;**Michael Segbefia; Henry Holdbrook-Smith, MD**Korle Bu Teaching Hospital, Accra, Ghana*

Purpose: Hip fractures constitute about 20% of the trauma workload. The associated mortality at 1 month and 1 year are about 10% and 20%-25%, respectively. And of those who survive, most never regain the preinjury quality of life. Few studies in Africa have examined the parameters associated with increased mortality over a long period, from the time of injury. This study therefore aimed at finding risk factors that may increase mortality in patients with proximal femur fractures over a 4-year period.

Methods: Incidence of mortality was assessed among 76 participants with proximal femur fractures from January to December 2014 and followed for 4 years. Outcome of interest was mortality at 1 month, 6 months, 1 year, and 4 years. Hazard ratios (HRs) were calculated using Cox proportional hazards regression, adjusting for mortality risk factors.

Results: Among the 76 participants (mean age, 75.8 years [standard deviation (SD) 12.02], 36 males [47.4%]), there were 21 death cases. The mean (SD) for days from time of injury to surgery was 16.4 (16.2). Hip fracture type was composed of 38 (50%) intertrochanteric, 35 (46.05%) transcervical, and 3 (3.95%) basicervical.

Mortality at 1 month, 6 months, 1 year, and 4 years was 6.6%, 13.2%, 19.7%, and 27.6%, respectively. A yearly increase in age was associated with a 1.053-fold increase in the risk of death ($P = 0.026$). Comparing females to males, there was no significant difference in mortality ($HR = 0.56$, $P = 0.324$). Participants with normal platelets levels versus those with abnormal platelets were at higher risk of dying ($HR = 33.97$, $P = 0.002$). Also, participants with an American Society of Anesthesiologists (ASA) score of III or IV were 3.575 times more likely to experience death than those with an ASA score of I or II ($P = 0.011$). Additionally, a higher risk of death was associated with patients with chronic obstructive pulmonary disease (COPD) ($HR = 6.32$, $P = 0.038$) and osteoporosis ($HR = 14.55$, $P = 0.001$).

Conclusion: Age, ASA score, COPD, and osteoporosis were the main predictors of mortality in the study population. These could serve as a guide when managing patients with proximal femur fractures in order to improve the outcome.