

Preoperative Nutritional Status Among Geriatric Neck of Femur Fractures Treated with Arthroplasty

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INTRODUCTION:

Nutrition plays a crucial role in the overall success of a joint replacement. Many older patients have complex medical problems and have a compromised baseline nutritional status that may affect the outcome of joint replacement for neck of femur fractures in these patients. Albumin, hemoglobin, total lymphocyte count, BMI and HbA1C are some of the important indicators of nutritional status and postoperative outcomes.

MATERIALS & METHODS:

This is a retrospective study of geriatric patients who sustained neck of femur fractures admitted to our hospital in 2022-2023 and who were treated operatively. Data was extracted from patient medical records and phone interviews. Information regarding demography, comorbidities, pre-morbid ambulatory status, timing of surgery, treatment details, complications, nutritional status, and functional outcome scores (Western Ontario and McMasters Universities Arthritis Index) post-surgery were collected.

RESULTS:

In this study cohort, 87.3% of patients received an inpatient nutritional assessment. The mean albumin, hemoglobin, urea, creatinine, c-reactive protein (CRP) and HbA1C values were 31.6 g/L, 11.8 g/dL, 7.3 mmol/L, 100.5 umol/L, 39.1 mg/L and 6.5% respectively. Men had significantly higher urea, creatinine, CRP and HbA1C compared to women. Patients with a higher ASA category had significantly lower albumin and hemoglobin levels but higher creatinine levels. The overall rate of complication was statistically higher in patients who had lower albumin and higher creatinine levels. These parameters did not affect time to surgery.

DISCUSSIONS:

Some previous studies suggest that routine testing of all healthy patients is not warranted before TJA¹. This study assessed pre-operative nutrition in patients which underwent joint replacement surgery. While most received an evaluation, blood tests revealed a link between albumin and creatinine level and the risk of complications after surgery. Despite multiple recommendations, nutritional laboratory studies are infrequently ordered prior to TKA².

CONCLUSION:

Most patients received a nutritional assessment, revealing a link between pre-operative blood investigation values and post-surgical complications. Patients with lower albumin and higher creatinine levels experienced a statistically higher complication rate. This suggests that optimizing pre-operative nutrition, particularly for high-risk groups, might be essential for better surgical outcomes.

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