



**Service Priorities and Programmes  
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**Prevalence of dehydration and its associations with postoperative care outcomes in elderly orthopaedic patients undergoing surgery**

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**Introduction**

Older people are vulnerable to dehydration due to age-related changes and illness. However, the importance of assessing hydration status among older people has often been overlooked, and its impacts on the postoperative care outcomes also have seldom been studied.

**Objectives**

This study aimed: (1) to study the prevalence of dehydration in elderly orthopaedic patients undergoing surgery; (2) to identify associations between dehydration and health conditions; and (3) to identify associations between dehydration and postoperative outcomes.

**Methodology**

A retrospective documentary review was conducted. Medical records of patients who admitted to the three orthopaedic wards of a local acute hospital between January and June 2013 for surgery and were aged 65 or over were retrieved. Chi-square test and Mann-Whitney U test were used for analysis.

**Result**

A total of 100 medical records were included for analysis. It was found that 21 patients had urine test result with urine specific gravity of 1.020 or higher at any time point during the episode of hospitalization, which was operationally defined as dehydrated in this study. No statistical significant differences in age, gender, living arrangement, comorbidities and physiological assessment recorded upon admission were noted between the euhydrated and dehydrated group. Most of the dehydrated patients had fever ( $p=0.007$ ), diarrhea ( $p=0.006$ ), tube feeding ( $p=0.028$ ) and foley catheter ( $p=0.000$ ) during hospitalization. There was a significantly higher proportion of dehydrated patients developed renal-associated sequelae ( $p=0.006$ ) and infection ( $p=0.024$ ) after surgery. The average length of stay of dehydrated patients

(12.86±14.80 days) was much longer than those euhydrated (8.51±5.06 days), though the difference was not statistically significant. The findings showed that the incidents of dehydration were highly associated with postoperative care outcomes among elderly patients. Despite of the high risk of dehydration for this group of patients, the findings also revealed the inconsistency in current practice regarding hydration status monitoring. Given that it may seriously affect the recovery of elderly patients after surgery, it is crucial to develop a standardized and effective way in detecting dehydration.