Do Older Surgical Patients Who Undergo Emergency Operation Have Higher Mortality And Readmission Compared To Those Managed Conservatively?

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#### Introduction:

It is unclear whether older surgical patients who undergo emergency operation have higher prevalence of mortality and readmission than those managed conservatively. We therefore examined the prevalence of emergency operations during emergency surgical admission of older people (≥65 years) and its association with mortality at 90 days post- admission and hospital readmission within 30 days of discharge.

#### Methods:

Data were employed from the Older Persons Surgical Outcomes Collaboration (www.OPSOC.eu) (2013 and 2014) to assess the prevalence of operations in older emergency surgical admissions. The effect of operation on study outcomes was examined using multivariate logistic regression adjusting for age, gender, polypharmacy, haemoglobin, albumin, and frailty.

**Results:**

#### A total of 727 patients [mean age (standard deviation)= 77.1 (8.2) years, 54% female] were included in this study. Of them, 185 (25%) underwent emergency operation. Patients that received an operation were younger than those who did not [76(7.7) vs. 78(8.4) years; *P*<0.001] and higher proportion of patients were males (30.2% vs. 23.5% in females; *P*=0.006). There was no difference between operated and non-operated patients for other characteristics examined (frailty, polypharmacy, serum albumin, and haemoglobin levels). We found no association between operation and both outcomes: adjusted odds ratio (AOR) (95%CI) were 0.27(0.30-1.41; *P*=0.644) and 0.77 (0.65-1.77; *P*=1.077) for 90-day mortality and readmission within 30 days after discharge, respectively.

#### Conclusions:

A quarter patients from this cohort had an operation during their acute surgical admission in the UK setting. There appeared to be no impact of operation on 90 days mortality and readmission in this population.

(250 words- limit is 250)