Postoperative Delirium as a predictor of 90-day hospital readmission in elderly patients undergoing femoral neck fracture reduction and osteosynthesis

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BACKGROUND:

Femoral neck fractures (FNF) are an important cause of hospitalization in elderly population. **Delirium** is a major complication in this subgroup and its occurrence has been associated with poorer outcome.

AIMS:

1. Assess if postoperative delirium is associated with 90-day hospital readmission after FNF reduction and osteosynthesis (RO)

METHODS:

WHAT? Observational, retrospective study of patients with FNF undergoing RO surgery alone;

WHEN? From January to December of 2016;

WHERE? In a tertiary university hospital.

Delirium: whenever documented at clinical process: acute cognitive dysfunction and/or psychomotor agitation;

90-day hospital readmission was considered for any cause of hospitalization.

Demographic variables analyzed:

✓ Age	✓ Treatment with psychoactive drugs	✓ Pre-op and pos-op days of hospitalization
✓ Sex	✓ Cardiac Heart Failure	✓ Type of anesthesia
✓ Institutionalization	✓ Pre-op Hb	✓ Pos-op complications
✓ Previous dementia	✓ Pre-op Albumin	

Univariate analysis with chi-square test; multivariate analysis with binary logistic regression; Statistical significance: $p < 0.05$

RESULTS:

	Total (n=134)	Ø 90-day hospital readmission (n=99)	90-day hospital readmission (n=35)	p value
Age (years)	83.46 (SD 9.7)	82.7 (SD 10.4)	86.4 (SD 6.2)	0.059
Female sex	92 (68.7%)	69 (69.7%)	23 (65.7%)	0.682
Institutionalization	22 (16.4%)	14 (14.1%)	8 (22.9%)	0.243
Dementia	29 (21.6%)	19 (19.2%)	10 (28.6%)	0.334
Psychoactive Drugs	64 (47.8%)	48 (48.5%)	16 (45.7%)	0.531
CHF	34 (25.4%)	21 (21.2%)	13 (37.1%)	0.057
Diabetes	21 (15.7%)	13 (7.1%)	8 (22.9%)	0.166
Pre-op Hb	11.5 (SD 1.5)	11.6 (SD 1.5)	11.5 (SD 1.4)	0.714
Pre-op Albumin	3.49 (SD 0.66)	3.54 (SD 0.72)	3.39 (SD 0.49)	0.295
Pre-op Days of Hospitalization	2.98 (SD 3.0)	3.02 (SD 3.2)	2.79 (SD 2.6)	0.704
Anesthesia				
General/Combined	55	43	12	0.349
Delirium	66 (49.2%)	42 (42.4%)	24 (68.6%)	0.009
Pos-op Days of Hospitalization	9.86 (SD 9.2)	9.56 (SD 8.8)	10.42 (SD 9.8)	0.640
Pos-op Complications	56 (41.8%)	38 (38.4%)	18 (51.3%)	0.261

	OR	IC 95%	p value
Age	1.05	0.98 - 1.11	0.143
Female sex	0.73	0.27 - 1.95	0.527
Institutionalization	1.31	0.46 - 3.73	0.614
Delirium	3.39	1.26 - 9.08	0.015
CHF	2.26	0.88 - 5.81	0.091
Diabetes	2.71	0.83 - 8.85	0.099

Postoperative delirium was associated with 90-day hospital readmission

CONCLUSION:

In our cohort of patients undergoing femoral neck fracture reduction and osteosynthesis postoperative delirium is associated with 90-day hospital readmission.