PREOPERATIVE DEPENDENCY AND OUTCOME AFTER SURGERY IN ELDERLY PATIENTS

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BACKGROUND AND GOAL OF STUDY

The assessment of functional status is critical in health care. The aim of our study was to evaluate the physical status and clinical outcome in surgical elderly patients.

Study goal: Evaluate the influence of preoperative dependency on the recovery and quality of life of elderly patients after elective surgery.

MATERIAL AND METHODS

Observational prospective study

Inclusion Criteria: Patients aged> 60 years, submitted to elective from May to July 2017 were included.

Exclusion criteria: age < 60 years old; inability to give informed consent; patients admitted in the ICU after surgery.

Lawton Instrumental Activities of Daily Living Scale (IADL):

- Evaluated before surgery (T0)
- Dependent patients (DP):** if at least one activity was affected

Clinical Frailty Scale:

- Evaluated vulnerability and frailty patients (FP) before (T0) and 24h (T1) after surgery.

Charlson Comorbidity Index Scale (CCI):

- To quantify comorbidities before surgery (T0).

Health-related Quality of Life (Euro QOL 5 dimensions - EQ5D):

- Evaluated **Quality of life (QOL)** at T0 and T90.
- Poor Quality of Life (PQL)** was defined as having problems in any of the 5 dimensions of EQ5D.

Montreal Cognitive Assessment (MOCA):

- To assess mild cognitive impairment (MCI), when MOCA <26.

Quality of Recovery 15 (QoR-15): Used before (T0) and 24h (T1) after surgery.

Statistical analysis: The Chi-square, Fisher’s exact or MannWhitney U tests were used for comparisons.

RESULTS AND DISCUSSION

Total of included patients: **235**

122 with preoperative dependency

Graphic 1: Dependency prevalence

Table 1 – Demographic and perioperative outcomes

Variable		DP (n=122)	Non-DP (n=113)	p value
Age, years, median, [P25- P75]		74 [66.65-80]	67 [64-72]	<0.001 ^c
Gender	Male	64 (52%)	44 (39%)	0.049 ^b
	Female	58 (48%)	69 (61%)	
Type of Anaesthesia	General	62 (51%)	77 (68%)	0.049 ^a
	Regional	32 (26%)	21 (18%)	
	Combined	20 (16%)	12 (11%)	
	Sedation/Analgesia	8 (7%)	3 (3%)	
Chronic kidney disease		17 (14%)	3 (3%)	0.002 ^a
Diabetes mellitus		39 (32%)	21 (18%)	0.024 ^b
Congestive heart failure		14 (11%)	4 (4%)	0.027 ^b
Ischemic heart disease		16 (13%)	3 (3%)	0.003 ^a
Arterial hypertension		92 (75%)	58 (51%)	<0.001 ^a
Dyslipidaemia		74 (61%)	47 (42%)	0.003 ^a
B-blockers use		40 (33%)	14 (12%)	<0.001 ^a
Statins use		75 (61%)	43 (38%)	<0.001 ^a
Insulin use		11 (9%)	3 (3%)	0.053 ^b
Mental Cognitive Impairment		106 (87%)	70 (62%)	<0.001 ^a
CCI, median, [P25-75]		8 [3-10]	5 [2-7]	<0.001 ^c

Table 2: Frailty by CFS

Frailty	DP (n=122)	Non-DP (n=113)	p Value
T0	49 (40%)	4 (4%)	<0.001 ^a
T90	62 (51%)	9 (8%)	<0.001 ^a

Table 3 Pre and post-operative health status comparison by EQ-D5

EQ-5D		DP (n=122)	Non-DP (n=113)	P value
Mobility	T0	94 (77%)	29 (26%)	<0.001 ^a
	T90	90 (74%)	34 (30%)	
Self-care	T0	66 (54%)	14 (12%)	<0.001 ^a
	T90	73 (60%)	21 (19%)	
Usual Activities	T0	83 (68%)	21 (19%)	<0.001 ^a
	T90	90 (74%)	34 (30%)	
Pain	T0	86 (70%)	40 (35%)	<0.001 ^a
	T90	82 (67%)	36 (32%)	
Anxiety	T0	96 (79%)	77 (68%)	0.076 ^b
	T90	85 (69%)	53 (47%)	0.001 ^a

Table 4 – Quality of recovery according to QOR-15

QoR-15	DP (n=122)	Non-DP (n=113)	p value
T0, median [P25- P75]	114 [100.75-138]	134 [64-72]	<0.001 ^c
T1, median [P25- P75]	107 [83.75-130]	102 [100-129]	0.114 ^c

Legend: ^a-Chi-squared test; ^b-Fisher test; ^c-Mann-Whitney test, **DP** -dependent patients, **Non-DP**-non-dependent patients, **MCI** – Mild Cognitive Impairment; **CCI**- Charlson Comorbidity Index; **CFS**- clinical frailty scale; **EQ 5D**- Euro quality of life 5 dimensions; **QoR-15**- Quality of recovery 15, **T0**- before surgery;**T1**- 24h after surgery; **T30**- 1 month after surgery; **T90**- 3months after surgery

CONCLUSIONS

Dependency is common among elderly patients. These patients had more comorbidities, poorer quality of life, worse health status prior surgery and showed MCI and frailty more frequently. After surgery, they had similar quality of recovery, but at 3 months follow-up they have poorer quality of life and were still more frail.