

# WHAT DO WE KNOW ABOUT POSTOPERATIVE DELIRIUM (POD)?

## RESULTS OF A NATIONAL SURVEY

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### BACKGROUND AND GOAL OF STUDY

POD is the **most common postoperative complication in elderlies**, but highly **under-diagnosed**.

The **aim of the study** was to assess anaesthesiologists perspectives and management of POD.

### METHODS

**Target Population:** Portuguese anaesthesiologists

**Online adapted survey (1) divided in 3 sections:**

- Demographic data;
- Preferences, routines and practices;
- Clinical cases.

**Answers** presented as a *Likert* scale from 1 to 5 or as yes/no/don't know

**Descriptive statistical analysis**

### RESULTS

234 surveys

Population description is presented in **Image 1**.

Detailed results are shown in **Table 1**.

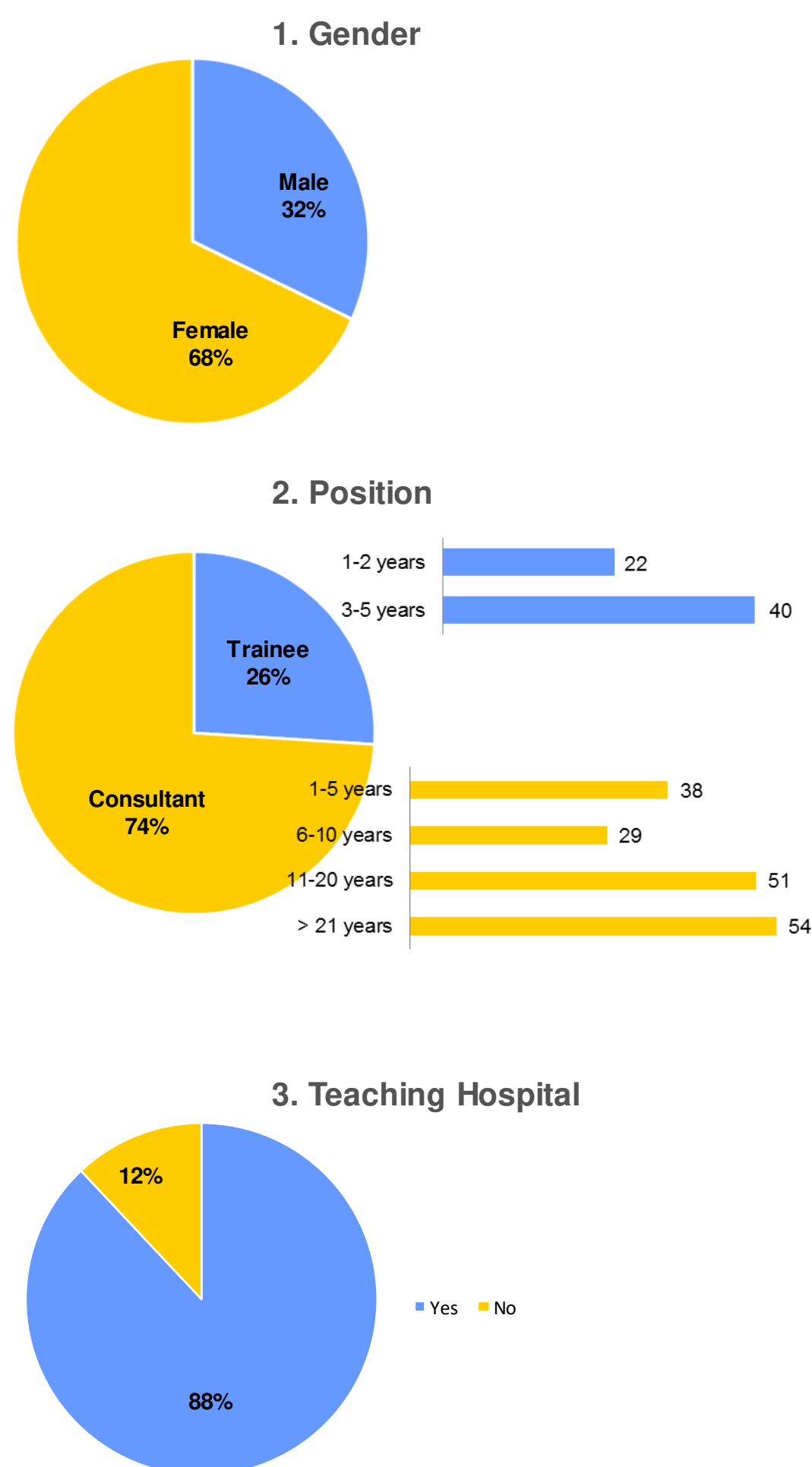


Image 1

Table 1						Mean	
QUESTIONS - Likert Scale 1- Disagree completely, 2- Disagree, 3- No opinion, 4- Agree partly, 5- Agree completely // Yes, No, Don't know - answers shown in %							
1.	If you were going to be submitted to GA, would you be worried about possible postoperative cognitive loss?	1 - 6,4	2 - 17,1	3 - 17,5	4 - 28,6	5 - 30,3	3,6
2.	In pre-operative evaluation what factors do you think should influence the anesthesia plan?						
	Patient wish	1 - 0,9	2 - 9	3 - 14,5	4 - 45,3	5 - 30,3	4
	Risk of PONV	1 - 0	2 - 5,6	3 - 9,4	4 - 41,9	5 - 43,2	4,2
	Risk of postoperative pain	1 - 0,4	2 - 1,7	3 - 2,6	4 - 27,4	5 - 67,9	4,6
	Risk of postoperative cognitive disorders	1 - 0,9	2 - 3	3 - 8,5	4 - 31,2	5 - 56,4	4,4
	Risk of adverse cardiac events	1 - 0,4	2 - 1,3	3 - 2,6	4 - 15	5 - 80,8	4,7
	Risk of adverse pulmonary events	1 - 0,4	2 - 0,9	3 - 1,3	4 - 17,1	5 - 80,3	4,8
3.	In pre-operative evaluation what neurocognitive side effects do you value most?						
	POD	1 - 0,9	2 - 4,7	3 - 14,1	4 - 45,3	5 - 35	4,1
	POCD	1 - 0,9	2 - 2,6	3 - 12,8	4 - 38,5	5 - 45,3	4,2
	Emergence agitation	1 - 0,4	2 - 8,5	3 - 22,2	4 - 44,4	5 - 24,4	3,8
	Awareness	1 - 0,4	2 - 0,4	3 - 1,7	4 - 25,2	5 - 72,2	4,7
4.	What importance do you consider for the following risk factors in the occurrence for neurocognitive side effects?						
	Age > 70yo	1 - 0	2 - 1,3	3 - 0,9	4 - 18,8	5 - 79,1	4,8
	Male gender	1 - 8,1	2 - 12	3 - 46,6	4 - 23,9	5 - 9,4	3,1
	Lower education	1 - 4,3	2 - 12	3 - 38	4 - 30,8	5 - 15	3,4
	Major surgery	1 - 0,4	2 - 1,3	3 - 3,4	4 - 33,8	5 - 61,1	4,5
	Previous myocardial infarction	1 - 4,7	2 - 8,1	3 - 25,6	4 - 33,3	5 - 28,2	3,7
	Previous stroke	1 - 0,4	2 - 2,1	3 - 9	4 - 35	5 - 53,4	4,4
	Diabetes	1 - 2,1	2 - 6,8	3 - 21,4	4 - 50	5 - 19,7	3,8
	Hypertension	1 - 2,1	2 - 9,4	3 - 30,3	4 - 41,9	5 - 16,2	3,6
	Alcohol abuse	1 - 0	2 - 1,7	3 - 4,3	4 - 35,5	5 - 58,5	4,5
	Severity scoring in critical ill	1 - 0	2 - 3	3 - 11,5	4 - 31,6	5 - 53,8	4,4
	ASA physical score	1 - 1,3	2 - 5,6	3 - 14,5	4 - 47	5 - 31,6	4
5.	Anesthesia depth monitors are available at your hospital?	Yes - 96,6%	No - 3,4%				
	If yes, when do you use them?	Always - 55,7%	When it is available - 20,2%	Only in high risk patients - 18,9%	Only during GA with muscle relaxation - 4,4%	Rarely - 0,9%	
6.	If you had surgery, would you like an anesthesia depth monitor to be used?	1 - 0,9	2 - 1,3	3 - 3,8	4 - 17,9	5 - 76,1	4,7
	Do you think they are too expensive to be used?	1 - 57,3	2 - 25,6	3 - 9,4	4 - 4,7	5 - 3	1,7
7.	Do you think that anesthesia depth monitors should be used in high risk patients or TIVA?	1 - 3,4	2 - 9,4	3 - 7,7	4 - 17,5	5 - 62	4,3
	Or for all patients?	1 - 2,3	2 - 11,1	3 - 12	4 - 32,9	5 - 41,7	4
8.	Do you think it would be useful to assess neurocognitive function pre-operatively (MMSE or other) to detect patients at risk to develop POD or POCD?	1 - 0,4	2 - 4,7	3 - 16,2	4 - 41	5 - 37,6	4,1
9.	Do you recall any episode of POD in your practice during the last year?	Yes - 59,8%	No - 40,2%				
	If yes, how many?	1 a 5 - 79,7	5 a 10 - 14	Mais de 10 - 6,3			
10.	Female patient, 75 yo, no chronic medication; is admitted for urgent femur fracture surgical repair. Pain is relieved with opioids. Oxygen saturation is 88%, blood pressure 160/110 mmHg, heart rate 110 bpm. She has fever, is agitated and confused, has trouble in giving adequate answers.						
a)	What anesthesia would you choose?	Spinal blockade - 46,2%	Sequential blockade - 14,1%	Combined (GA+PNB) - 19,2%	Combined (GA+neuroaxial block) - 3%	GA - 11,5%	TIVA - 6%
b)	In case of a GA, would you use an anesthesia depth monitor?	Yes - 92,3%	No - 7,7%				
c)	In the PACU the patient state worsens, she becomes agitated and tries to pull off the iv access and monitoring. It is not clear if the patient is in pain. What is your first action?	Administer analgesic - 62,4%	Administer anxiolytic - 11,1%	Administer analgesic and anxiolytic - 25,2%	Physical containment - 1,3%		
d)	If you decide to administer an anxiolytic, which class of drug would you choose?	Benzodiazepine, such as Midazolam - 36,5%	alpha-2 agonist, such as clonidine or dexmedetomidine - 15,9%	Neuroleptic, such as haloperidol - 33,9%	Hypnotic, such as propofol - 13,7%		
e)	Is there in your hospital protocols to monitor patients that develop POD						
	In the PACU	Yes - 29,1%	No - 55,1%	Don't know - 15,8%			
	In the surgical ward	Yes - 12,4%	No - 59%	Don't know - 28,6%			
e)	Is CAM, CAM-ICU, NuDesc or ICDS-C used to screen for POD in the PACU in your hospital?	Yes - 15,2%	No - 62,2%	Don't know - 22,6%			
11.	Do you believe that POD is a neglect area within the field of anesthesia?	Yes - 97,9%	No - 2,1%				
12.	Do you believe that POCD is a neglect area within the field of anesthesia?	Yes - 97%	No - 3%				
13.	Do you believe that awareness is a neglect area within the field of anesthesia?	Yes - 53%	No - 47%				

Table 1: %: percentage; GA: general anesthesia; PONV: postoperative nausea and vomit; POD: postoperative delirium; POCD: postoperative cognitive dysfunction; yo: years old; ASA: American Society of Anaesthesiologists; TIVA: total intravenous anaesthesia; MMSE: Mini Mental State Examination; PNB: peripheral nerve block; PACU: Post Anesthesia Care Unit; CAM: Confusion Assessment Method; CAM-ICU: Confusion Assessment Method-Intensive Care Unit; NuDesc: Nursing Delirium Screening Scale; ICDS-C: Intensive Care Delirium Screening Checklist

### CONCLUSIONS

Overall, anaesthesiologists are aware of the importance, risk factors and management for POD. Intraoperative monitoring of DA is recommended to lower the incidence of POD; although it is widely used there is room for improvement. Protocols for preoperative cognition evaluation and POD diagnosis and treatment should be sought.