Incidence and impact of chronic pain in discharged patients from an Intensive Care Unit

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Background and Goal of Study

Pain in the intensive care unit (ICU) patients is frequent, with an incidence of up to 50% in medical and surgical patients at rest and during common care procedures. Evidence demonstrates that adequate pain control is associated with improved patient outcomes in the ICU. This work aims to evaluate the acute pain during hospitalization and investigate the incidence and impact of chronic pain in patients after discharge from an ICU.

Material and Methods

- Patients admitted between October 2014 and May 2015 were included in this study (6 to 12 months post-discharged)
- Retrospective study of the incidence of pain during the ICU stay by evaluation of the Numeric Pain Scale (NPS) and the Behavioral Pain Scale (BPS).
- A questionnaire and telephone follow-up method was used to investigate the incidence of chronic pain, by the application of the Brief Pain Inventory (BPI).
- Exclusion criteria included pre-existing chronic pain conditions and intrahospital and post-discharge death
- Statistical analyses were performed by using SPSS® 20.0.

Results and Discussion

- Total of patients: 72
- Score of 0 (NPS) or 3 (BPS): 41.7%
- Opioid analgesics: 25%
- No analgesia: 18%

Table 1. Sample's characteristics

	n (%)	SD	Median
Mean age (years)	63	± 18.3	
Female gender	39 (54.2%)		
Admission type			
Medical	49 (68.1%)		
Surgical	23 (31.9%)		
Sepsis	42 (58.3%)		
APACHE II	18.26	± 8.27	
SAPS II	36.14	± 15.51	
ICU stay (days)	7.0		5.0
Hospital stay (days)	18.4		15.6
Mechanical ventilation (days)	4.2		2.0

Table 2. Pain in the ICU

	Mean	Median	Max	Min
NPS	2.2	3	7	0
BPS	3.9	3	7	3

- Chronic pain was reported in 55.6% of all respondents
- Shoulder pain was reported in 22%
- 42.5% of the patients referring chronic pain were taking analgesics (88.2% with paracetamol and/or metamizole), with a mean pain relief of 58.8%
- None of these patients was being followed in a pain unit

- Patients with persistent pain after ICU discharge had higher levels of pain assessed during hospitalization (**p=0.042**)
- Duration of mechanical ventilation of 5 or more days was associated with chronic pain referred to the shoulder joint (41.2% vs 16.4%; **p=0.039**)

Table 3. Questionnaire results – pain and functional interference

	n (%)	Mean	SD	Max	Min
Pain	40 (55.6)	3.2	± 1.4	9	1
General activity		4.3	± 2.5		
Mood		3.4	± 2.4		
Walking ability		3.2	± 3.1		
Normal work		3.7	± 2.3		
Relations with others		2.4	± 1.8		
Sleep		2.2	± 2.3		
Enjoyment of life		2.9	± 2.4		

Conclusions

Chronic pain has a high incidence in survivors of critical illness after ICU discharge and can have a negative impact on patients' quality of life. The systematic assessment of pain and its control are essential as greater levels of acute pain are associated with higher incidence of chronic pain. Follow-up of these patients is recommended and provides an opportunity for evaluation of pain and dysfunction. Further studies are needed addressing risk factors for developing chronic pain in critically ill patients, long-term outcomes in survivors of critical illness and possible therapeutic interventions to reduce chronic pain.

References:

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