Postoperative Nausea and Vomiting in Outpatient Surgery: incidence and risk factors - Audit

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Background

Nausea and vomiting are one of the most frequent postoperative complications in Outpatient Surgery and an important factor in life quality after discharge.

Portuguese guidelines show an incidence of postoperative nausea and vomiting (PONV) in 33-36% of outpatients, and in 72% of them only occur after discharge. ¹

Goal of the audit

Evaluate the incidence of PONV in the recovery room, at 24 hours and 72 hours after discharge, compare its incidence according to the data presented by the Portuguese Outpatient Surgery Association and study possible risk factors (RF).

Methods

- Retrospective audit, performed in June and July 2017, in outpatient surgery in a tertiary center.
- Excluded paediatric patients.
- Registered validated RF (sex, smoking status, previous history of PONV and motion sickness, opioids in the perioperative period – **Apfel Score**)
- Registered other possible RF described in the literature (body mass index, use of halogenated or nitrous oxide, type of surgery and duration of anaesthesia).
- Data collected: Electronic Clinical Process and patient call at 72 hours.
- Statistical analysis: IBM SPSS® 22, p <0.05 considered significant.

Results and Discussion

- Included 880 patients
 - 58.5% of whom fulfilled the prophylaxis protocol.

Outcome 1

PONV incidence	
Recovery room	4,2% (n=33)
24 hours postoperative	9,7% (n=70)
72 hours postoperative	7,6% (n=54)

Outcome 2

Apfel Score	
Risk Factor	Incidence
Female	59,7%
Non smokers	84,5%
Previous history of PONV or motion sickness	2%
Opioids in the perioperative period	39,4%

Outcome 3

- From the analysis of the variables not included in the **Apfel Score**, the duration of anaesthesia > 120 minutes was identified as RF, but only in the recovery room (p=0.006). The remaining variables did not show any relation with the incidence of this complication, in any period studied.

Conclusion

- PONV incidence in this population was lower than that described in the literature, presumably as result of a correct evaluation of the patient at risk.
- 17.3% (n = 134) had PONV after discharge, problem that cares our attention and should be a priority for the anaesthesiologist.
- Remaining variables did not show any influence on the occurrence of PONV, except duration of anaesthesia > 120 minutes.
- Action plan**: current protocol should be in order to include this new RF and to optimize PONV prophylaxis.

¹ Portuguese association of ambulatory surgery. Portugueses guidelines of prophylaxis and treatment of nausea and vomiting in ambulatory surgery. 2012