

MEETING ABSTRACT

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Postoperative nausea and vomiting and opioids in children

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Background

We developed and implemented an interdisciplinary pain concept to assess and prevent pain as well as therapy-related side effects with the objective of outcome improvement. Each pain management starts with profound preoperative information concerning the expected postoperative pain and what can be done to prevent it. For acute pain therapy a regular basic medication with non-opioids and an analgesic on demand (usually opioids) for the management of breakthrough pain of ≥ 4 is provided postoperatively [1]. There are several studies and risk scores concerning postoperative nausea and vomiting (PONV) related to opioid-treatment in adults [2-6]. We performed a study about this topic in children.

Material and methods

After approval of the institutional ethics committee and after receiving informed consent from parents and children, we conducted a prospective observational study, including 240 children, mean age 14.7 ± 1.9 years (range: 11 to 18 years) (43% female) within the first 48 hours after an operation. We evaluated sex, age, BMI, duration of operation, ASA-state and medication during surgery, in the recovery room and on ward. Study participants received a survey about the occurrence of nausea or vomiting and their pain intensity.

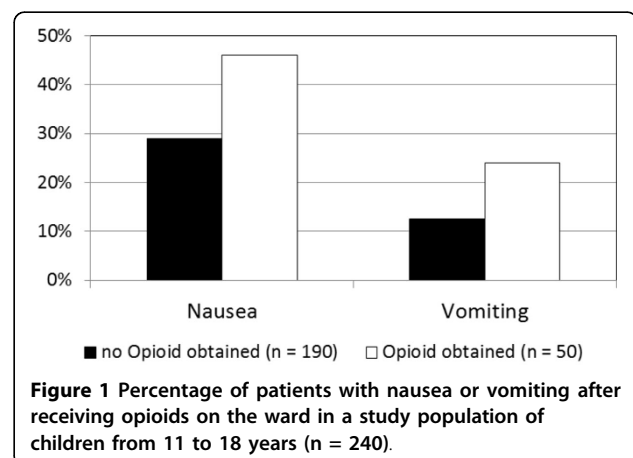
Results

With one exception, opioids were always applied during surgery. Out of the 240 patients, 110 (45.8%) received an opioid in the recovery room and 50 (20.8%) in the first 48 hours on the ward. Opioids administered during surgery or in the recovery room had no influence on

nausea on the generalward. In contrast the use of opioids on the ward increased the number of patients suffering from nausea compared to patients receiving no opioid (46% vs. 29%; $p = 0,022$). Comparable results are observed for vomiting (24% vs. 13%; $p = .045$). Overall 51 patients (21%) suffered from pain at rest ≥ 4 . Increased pain at rest elevated the incidence of nausea ($p = .005$), but not of vomiting ($p = .551$). While 49% of patients with pain at rest ≥ 4 suffered from nausea only 28% of patients with pain at rest < 4 suffered from nausea.

Conclusions

Our study confirms the results from adults, that the postoperative use of opioids on the ward, but not in the recovery room, increased the incidence of PONV. Higher pain levels at rest correlated with an increased incidence of postoperative nausea, but not vomiting. Our results shall encourage an increased awareness about the high incidence of PONV postoperatively, especially after its



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application on the ward. Additionally, they emphasize more preventive use of antiemetics.

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