Postoperative nausea and/or vomiting (PONV) is an annoyance, particular during anesthesia emergence, and its influence on the cost of medical care is significant. It is estimated that more than 230 million major surgeries are performed annually around the globe, and about 30% of the patients, with an incidence of 80% in high-risk group, suffered from PONV; it sums up to more than 69 million people in the world every year. Furthermore, about 1% of ambulatory surgical patients are admitted overnight because of intractable PONV. Treatment of PONV and associated complications, and time lost from related works are estimated about millions of US dollars annually. Yet, since it is self limiting in nature, seldom chronic, and almost non-lethal, it rarely becomes a big issue for anesthesiologists; and its impact is usually underestimated, however, it matters to patients. Sometimes, patients would rather suffer from pain than PONV, and are willing to pay substantial amounts of money for effective prevention and treatment. No wonder Kapur described postoperative nausea and vomiting the “big little problem”.

The prevalence of PONV has stayed unchanged over past decades, regardless of the introduction of new antiemetic drugs, short-acting anesthetics, and minimally invasive surgeries. The “big little problem” PONV depicted by Kapur is still a truth nowadays despite the hard works of anesthesiologists and pharmaceutical companies. As an editorial aiming at the prevention of PONV, when PONV and its annihilation are addressed, doctors have in mind the mental attitude: “we’re tired of waiting”. Although the persisted high incidence of PONV has been partly due to the remarkable increase in ambulatory surgery and the growing emphasis on earlier mobilization and discharge postoperatively, a key barrier to the development of an effective treatment for PONV has been the lack of a suitable animal model. Consequently, anesthesiologists have to count on the results of numberless clinical trials, most of which are small-sized and even some with suspicious power.

In this issue of Acta Anaesthesiologica Taiwanica (AAT), Bhakta and colleagues report the results of a randomized controlled trial determining the safety, efficacy and feasibility of propofol-based anesthesia in gynecological laparoscopies in reducing incidences of PONV compared to a standard anesthesia using thiopentone/isoflurane. Surprisingly, with a sample size of 30 patients in each groups, the authors demonstrated that propofol-based-anesthesia was associated with significantly less PONV, implying a strong preventive potential for this strategy. Also in this issue of AAT, to overcome the aforementioned doubtful validity associated with small sample sizes, Matsuura and colleagues compared the incidence and duration of PONV between propofol anesthesia and sevoflurane anesthesia utilizing a retrospective analysis of an institutional registry. Interestingly, with a large original sample size of 21,606 general anesthesia cases, a higher incidence of PONV received propofol anesthesia compared to sevoflurane anesthesia, however less PONV occurred after propofol anesthesia in propensity score matched 2,554 patient pairs. This result supported the preventive potential of propofol-based anesthesia, and also demonstrated a good model for PONV research.

As patients are more satisfied with PONV prophylaxis than with the treatment of symptoms after their occurrences, prophylactic strategy has become the customary approach to curtail postoperative emetic symptoms. However, the mechanisms underlying PONV are complex that a general cure-all is almost implausible, therefore a multimodal approach serves better prevention and treatment. To accomplish this objective, there is more than one option to consider. The first approach would be to wait and see, and to treat PONV once the symptoms do arise. However, this idea obviously requires a vigilant clinical setting, and quick and aggressive management. Such approach is incompatible with busy environments, at least 24 h after anesthesia, when emetic symptoms, especially nausea, are frequently missed. It makes this approach impossible. The second major option would be the so called ‘stratified medicine’, i.e. to tailor the remedial decisions based on the patients’ risks estimated by validated prognostic models. However, the results on whether use of PONV risk scores can significantly decrease the rate of PONV remains controversy, and there has been a strong dispute and discussion whether this approach truly works in a busy clinical scenario. A third approach would be that all patients are given one or more antiemetics during the course of surgery to reduce the incidence of PONV as possible. Given the fact that the easy accesses are safe and low-priced, there is little indication to deny these strategies for fear of side effects. We believe, with the new support from the articles in this issue of AAT, patients might be benefit from incorporation of propofol into regular anesthesia practice.

Conflicts of interest

All contributing authors declare no conflicts of interest.

References


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