From universal postoperative pain recommendations to procedure-specific pain management

Hélène Beloeil, Francis Bonnet

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Helene Beloeil [1], Francis Bonnet [2]

[1] CHU Rennes, Pôle Anesthésie et Réanimation, Inserm, UMR 991, CIC 1414 and Université de Rennes 1, F-35033 Rennes, France

[2] Département d' Anesthésie Réanimation, Hôpital Tenon, Assistance Publique Hôpitaux de Paris Université Pierre & Marie Curie, Paris, France.

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Hundreds of articles on postoperative pain management are published every year: i.e. a search for postoperative pain in 2016 on PubMed retrieved more than 2000 articles. This enormous amount of evidence-based literature should bring improvement to clinical practice. Is this really the case? Indeed the design of these studies has been criticized because only the efficacy was assessed without detailing the conditions of utilization. To begin with, the efficacy has to be clinically meaningful, but this is not always the case: a mean difference of less than 10 on the 0-100 mm pain VAS, between patients receiving the evaluated analgesic and a control group, is not clinically relevant and is therefore useless (1). In addition, pain intensity difference is not the main goal of the typical clinical trial design that focuses more commonly on the opioid sparing effect. However, from a clinical point of view, opioid sparing is beneficial to the patients only when it is associated with a decrease in the incidence of opioid side effects such as nausea, vomiting and/or urinary retention. In addition, most of the medications, combinations of medications, and techniques commonly used in clinical practice have not already been evaluated (2). Eventually, the efficacy of analgesic agents differs between surgical procedures (3). However, universal recommendations are made thereafter from pooling the data of these studies using systematic analyses. These meta-analyses have several limitations including heterogeneity and inconsistency.

Moreover, the analgesic medications protocols and/or techniques tested are usually compared with placebo or at least with less than optimal pain protocols given to patients in the control group. As long as the comparison is not made against a treatment defined as the best quality standard for a specific procedure at the time of the comparison, the value of such clinical trials is weak as they do not really provide relevant information allowing improvement of patients' comfort and postoperative pain control. On the contrary, what clinicians need when dealing with postoperative pain control, is to know if the analgesic protocols they used

are validated as the gold standard for a given surgical procedure and if these protocols can be improved for other ones providing better pain control and/or less side effects.

Since 2002, the Prospect group has been working on a different approach to postoperative pain management (4). This group is a unique collaboration between surgeons and anaesthesiologists. Its purpose is to produce recommendations by examining procedure-specific outcomes. The process by which the recommendations are formulated takes account not only the quality of the available procedure-specific evidence (using the protocol of the Cochrane Collaboration to evaluate randomized controlled trials of analgesic, anaesthetic, and surgical interventions affecting postoperative pain), but also critical experts' interpretations of the study design in the setting of the surgical procedure and the analgesic technique. The conclusions of the group are the following:

- Recommendations need to take into consideration the differences in character, location and severity of the pain associated with different surgical procedures;
- Considerations for easy clinical practice application have to be emphasized when analysing the literature;
- New medications or techniques can only be recommended if an improvement from the standard analgesic regimen recommended at the time has been proven;
- Comparisons of new medications or techniques with a placebo do not bring any new insight

The whole group considers that there is no more need for repeating meta-analysis or original studies. They are indeed numerous and do not bring new information while only pointing out the heterogeneity of the studies. On the contrary, there is a need for defining unmet commitments such as the number of patients that remain in pain postoperatively after a given surgical procedure despite the use of validated pain treatment, and/or the number of patients who experience side effects when a pain treatment considered as effective is used. New outcomes may consequently be defined, such as reducing the percentage of patients with postoperative VAS >40 when using new analgesic strategies, and /or assessing the value of analgesic combinations not already documented. Eventually, all studies have to be put into

the context of enlarged perspectives of improvement of patient comfort and compliance to supportive care susceptible to improve postoperative morbidity and mortality.

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