



Did gender affect opioids for analgesia and anesthesia?

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We appreciate the valuable comments from Wang *et al.* Some previous studies found that males required more opioids for analgesia and anesthesia than females did (1,2). Males require higher doses to alleviate similar pain because females are more sensitive than males to opioid receptor agonists (3). Multiple mechanisms are possible reasons for sex differences in opioid analgesia, including pharmacokinetics and pharmacodynamics, gonadal hormonal effects, the balance of analgesic/anti-analgesic processes, genetic influences, and psychological factors (4). However, the pharmacokinetics and pharmacokinetics of remifentanil were affected by age and Body Mass Index, and there was no influence of sex on any pharmacokinetic or pharmacodynamic parameter (5). Other Previous research established a pharmacokinetic model of sufentanil that was not based on sex (6). In our study, we showed no apparent differences between men and women in the effective dose of alfentanil in painless bronchoscopy (7). Previous research also has shown that alfentanil analgesia is an absence of sex differences (8). We humbly agree that there is an important bias in our study. Future studies are needed to investigate the analgesic effects of alfentanil at different anesthetic protocols and in different genders. In short, clinicians need to be aware of whether there are gender differences when administering opioids in different situations.

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