



...why remifentanil?

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To the Editor:

I would like to make some comments to the manuscript by Waturu Sakai et al. [1].

- (1) The authors make a big effort analyzing retrospectively their database. They choose to study the effects of remifentanil in the incidence of renal damage (AKI) during cardiac surgery (valve procedures) with cardiopulmonary bypass (CPB).
- (2) In the introduction, they mention the reasons why remifentanil may have benefits during CPB. However, those benefits do not necessarily link to the development of AKI under the studied conditions.
- (3) To my knowledge, only two anesthetics have been associated with renal failure: enflurane and metoxiflurane. Both off the market for more than 50 years. All anesthetics, old and new, intravenous or halogenated agents including remifentanil, have been deeply and extensively studied, and no association with AKI has been found in different types of surgical procedures.

- (4) In the analysis described, only patients with normal plasma creatinine were studied. In those groups, the chance of finding “one factor” that may have incidence on AKI is almost impossible.
- (5) AKI during cardiac surgery with CPB has been strongly studied in the last 60 years. So far, many factors have been associated to renal failure: changes in temperature, hemoglobin, hemodilution, nonpulsatile flow, systemic inflammatory reaction, perfusion pressure, hemodynamic alteration pre- and post-bypass, vasoactive drugs, nephrotoxic drugs, CPB time, among many others. However, to my knowledge, no anesthetics drugs have been considered among those factors as yet.

Reference

1. Saakai W, Yoshikawa Y, Hirata N, Yamakage M. Effect of remifentanil during cardiopulmonary bypass on incidence of acute kidney injury after cardiac surgery. *J Anesth.* 2017;31:895–902.

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