

We investigated the association between intraoperative magnesium sulfate infusion and incidence of AKI after major laparoscopic abdominal surgery” Oh et al (2019).

Abstract:

Magnesium sulfate can be used as a co-adjuvant drug during the perioperative period and has multiple benefits. Recent evidence suggested that perioperative magnesium sulfate infusion may lower the risk of postoperative acute kidney injury (AKI). We investigated the association between intraoperative magnesium sulfate infusion and incidence of AKI after major laparoscopic abdominal surgery. We retrospectively analyzed the medical records of adult patients 20 years or older who underwent elective major laparoscopic abdominal surgery (>2 hours) between 2010 and 2016. We investigated the association between intraoperative magnesium sulfate infusion and the incidence of postoperative AKI until postoperative day (POD) 3 using a multivariable logistic regression analysis. We included 3,828 patients in this analysis; 357 patients (9.3%) received an intraoperative magnesium sulfate infusion and 186 patients (4.9%) developed postoperative AKI by POD 3. A multivariable logistic regression analysis showed that magnesium infusion was associated with a significant decrease (63%) in postoperative AKI (odds ratio, 0.37; 95% confidence interval, 0.14-0.94; $P = 0.037$). Our study suggested that intraoperative magnesium sulfate infusion is associated with a reduced risk of postoperative AKI until POD 3 for patients who underwent laparoscopic major abdominal surgery. Well-designed, prospective studies should be conducted to further substantiate these findings.

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Reference:

Oh, T.K., Oh, A.Y., Ryu, J.H., Koo, B.W., Lee, Y.J. and Do, S.H. (2019) Retrospective analysis of the association between intraoperative magnesium sulfate infusion and postoperative acute kidney injury after major laparoscopic abdominal surgery. *Scientific Reports*. 9(1), p.2833.



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