



## Passive Smoking Also Affects Recovery from Anaesthesia

### Pasif Sigara İçiciliği Anesteziden Derlenmeyi de Etkiler

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Dear Editor,

The study of Ozturk et al. (1), which was entitled 'Effect of smoking on reversing neuromuscular block' and published in *Turk J Anaesthesiol Reanim* 2016; 44: 206-211, compared the duration of antagonism and efficacy of sugammadex in smokers vs. non-smokers (1). The authors reported that the muscle relaxant was associated with a shorter duration of clinical efficacy and prolonged intubation time and time to reach TOF 0.7–0.8–0.9 values in smokers, albeit statistically non-significant.

In 120 paediatric patients, we evaluated the effects of passive smoking on recovery time and perioperative respiratory complications in the study 'Effects of passive smoking on respiratory system in elective paediatric cases', which we recently presented in the TARK 2016 oral contest of clinics (KY08). Children whose parents smoked at home were considered as passive smokers. We found a significantly longer duration of recovery and higher rates of respiratory complications, especially in the postoperative period, in passive smokers than in individuals not exposed to smoking (control group). The recovery time was 20.78±6.14 min and 14.36±4.07 min in the passive smoker group and control group, respectively ( $p<0.01$ ). While the incidence of respiratory complications during recovery was 31% in the passive smoker group, it was 16% in the control group ( $p<0.05$ ).

Active or passive smoking impairs ciliary functions in the respiratory tract, leading to increased secretion, which in turn may cause respiratory complications during recovery and prolong the recovery time. Thikkurissy et al. (2) reported a prolonged discharge time from recovery in passive smokers. Hosten Seyidov et al. (3) and Drongowski et al. (4) found increased rates of complication during recovery in passive smokers. In addition, Lakshmiopathy et al. (5) showed a 10-fold increase in laryngospasm during anaesthesia in patients exposed to smoking. As reported in the study of Ozturk et al. (1), smoking affects the efficacy of and recovery time from muscle relaxants and even passive smoking may increase the recovery time and respiratory complications. Therefore, considering the possibility of negative influences of either active or passive smoking on anaesthetic procedures, the findings of the study about recovery times from muscle relaxants need to be regarded as clinically relevant, keeping in mind that smoking exposure may be associated with an increase in complication rates and prolonged or troublesome recovery, especially in children.

### References

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4. Drongowski RA, Lee D, Reynolds PI, Malviya S, Harmon CM, Geiger J, et al. Increased respiratory symptoms following surgery in children exposed to environmental tobacco smoke. *Paediatr Anaesth* 2003; 13: 304-10. [CrossRef]
5. Lakshmi N, Bokesch PM, Cowen DE, Lisman SR, Schmid CH. Environmental tobacco smoke: a risk factor for pediatric laryngospasm. *Anesth Analg* 1996; 82: 724-7. [CrossRef]

## Author's Reply

### Re: Passive Smoking Also Affects Recovery from Anaesthesia

Dear Editor,

We thank the author for the contribution he has made by referring our article named "Effect of smoking on reversing neuromuscular block" which was published on Turkish Journal of Anaesthesiology and Reanimation.

In our study we aim to compare the effect stress of sugammadex, which is used to antagonize rocuronium bromide that is a nondepolarizing neuromuscular blocker, on smoking and non-smoking patients and the duration of antagonizing. As a result of our study the intubation times of smoking and non-smoking patients, the first rocuronium bromide dose and the time of reaching train of four (TOF) 0.7-0.8-0.9 in the stage of extubation were compared and a statistically relevant difference was observed. Although it is not statistically relevant; the time of reaching TOF 0.7-0.8-0.9 was longer in smoking groups than in non-smoking groups. In the study named "Effects of passive smoking on respiratory system in elective pediatric cases" which is applied on 120 pediatric patients it is found that passive smoking enlarge the time of

recovery and increases the respiratory tract complication ratio. This result supports our study. Although it is known that smoking increases the respiratory tract complication, when literature is searched different results have been found about the effect on rocuronium bromide.

The studies about the effects of smoking, which has negative effect on body systems, on the muscle relaxant that are used in anesthesia application very often and on the drugs which are used to antagonize the muscle relaxant and the studies which show the necessity of quitting smoking that gives big harm in the country's economy and human health, showing the complications due to smoking have great value.

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