

Antibacterial and Anaesthetic Effects of Thiopental-Propofol Mixtures in Dogs

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Abstract

Antibacterial properties of 1:1, 1:2, 1:3 and 1:4 thiopental-propofol mixtures were determined by inoculating a known quantum of *Staphylococcus aureus* and *Bacillus subtilis* into each anaesthetic mixture. The number of colony forming units (CFU) grown from the subculture at 0, 6, 24, 48 hours, 7 days and 14 days were determined. Results showed that mixtures at ratio of 1:2, 1:3 and 1:4, supported while 1:1 mixture inhibited the growth of *S. aureus*. However, all anaesthetic mixtures did not support the growth of *B. subtilis*. Administration of fresh and 7-day old 1:1 thiopental-propofol mixtures in 6 dogs to maintain 15 minutes of intubation time showed that the 2 regime did not result in adverse cardiopulmonary and blood parameters. Transient apnea following induction was observed. C-reactive protein (CRP) of fresh thiopental-propofol mixture tended to decrease post-anaesthesia. Comparatively in 7-day-old treatment group, CRP only started to decrease at 24 hour post anaesthesia. Compared to fresh mixture, slightly more 7-day old mixture was used to induce and maintain anaesthesia and resulting in slightly longer recovery. No inflammatory signs, depression, inappetance, nausea or vomiting was observed in any of the dogs within the 2-week experimental period.

Keywords: thiopental-propofol, antibacterial effect, anaesthetic effect