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## Temperature and cisatracurium degradation: So what is new?

Sir,

We read the article ‘Cisatracurium degradation: Intravenous fluid warmer the culprit?’ by Khan *et al.*<sup>[1]</sup> The authors administered cisatracurium through 150 cm long hotline tubing and observed that the drug failed to produce clinical effect. The authors quoted that ‘there is no report in the literature suggesting that there is a shortening of its activity or quality of action by enhanced metabolism when administered as an infusion via a channel at higher than body temperature’.

However, there is enough literature to suggest that rise in temperature (body temperature or room temperature) will reduce the potency of cisatracurium as its metabolism is temperature- and pH-dependant. Tewari and Sikora<sup>[2]</sup> reported increased metabolism of cisatracurium in a patient with fever. In individuals undergoing coronary artery bypass surgery with induced hypothermia, Cammu *et al.*<sup>[3]</sup> found that the half-life of cisatracurium during hypothermia gets prolonged. De Winter *et al.*<sup>[4]</sup> studied the impact of temperature exposure on stability of drugs and found that cisatracurium is the first drug to lose its potency. The manufacturers also recommend that the drug should be stored at 2–8°C to preserve potency. The rate of loss of potency increases to approximately 5% per month at 25°C. Upon removal from refrigeration to room temperature (25°C), cisatracurium should be used within 21 days.

It is a common practice to avoid the administration of drugs such as cisatracurium through hotline tubing considering its temperature-dependant metabolism. This article just upholds the well-known pharmacokinetic properties of cisatracurium, which were established more than a decade ago.

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