Evaluation of anaesthetic activity of some aminoalkanol derivatives

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Derivatives of aminoalkanols such as KM113 and KM314 are considered anticonvulsant drug candidates, and they exhibit sodium channel blocking effect. Therefore, the aim of the study was to determine possible local anaesthetic activity of six aminoalkanol derivatives: KM117, KM113, KM128, KM314, KM331, and KM332 in the form of hydrochlorides. Local anaesthetic activity was measured using two methods: according to Bülbring and Wajda and according to A. Erenmemisoglu et al. (tail immersion test). Antihistaminic activity was measured according to Magnus.

All compounds except for KM113 exhibit local anaesthetic activity in the tail immersion test with lidocaine as a reference compound. The effect is not observed in the model according to Bülbring and Wajda. None of the tested compounds exhibit significant anaesthetic activity 24 h after administration, which proves reversible mechanism of action and absence of necrotic changes in the injection site. None of the compounds exhibited antihistaminic activity.

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