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The effect of tramadol on blood glucose levels in rats

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Tramadol, is a central acting analgesic that possesses weak affinity for the μ -opioid receptor and modifies transmission of nociceptive impulses through inhibition of monoamine reuptake. This study was designed to determine the effect of tramadol on blood glucose levels and also to investigate whether or not alpha-2 adrenergic receptors were responsible for this effect. A significant rise in blood glucose levels was observed following administration of i.v. tramadol. Pre-treatment with both yohimbine and idazoxan (1 mg.kg^{-1}) significantly attenuated tramadol-induced hyperglycemia. The results of the study indicate that, tramadol administered at an analgesic dose of 1 mg.kg^{-1} produces hyperglycemia in diethyl ether anesthetized rats. Reversal of this effect with α_2 -adrenoceptor blocking agents suggests that monoaminergic pathways which contribute to the analgesic action of tramadol may have a role in the hyperglycemic action of the drug.

Biography

Ayşe Karci has completed her medical education at Ege University, Turkey and was specialized in anesthesiology in Dokuz Eylul University School of Medicine and still working in the same hospital as an Associate Professor. She has worked in the Department of Obstetrics and Labor Unit as anesthesiologist and was also the Director of School of Anesthesia Technicians for about six years. She has 16 publications in reputed journals and 29 Turkish papers in the field of anesthesia.

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