

Effects of clonidine on a C-fibre reflex in the rat

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A C-fibre reflex elicited by electrical stimulation within the territory of the sural nerve, was recorded from the ipsilateral biceps femoris muscle in anaesthetized rats. The temporal evolution of the response was studied using a constant stimulus intensity (3 x threshold) and recruitment curves were built by varying stimulus intensity from 0 to 7 x threshold. The intravenous administration of 0.02-0.2 mg/kg clonidine resulted in a dose-dependent depression of the C-fibre reflex. The α_2 -adrenoceptor antagonist idazoxan completely prevented this depressive effect of clonidine. The effects of clonidine on the C-fibre reflex elicited by a wide range of stimulus intensities were investigated using recruitment curves: following 0.16 mg/kg clonidine, a dramatic shift of the recruitment curve to the right was seen with both an increase in the threshold and a decrease in the slope. Clonidine also produced a dose-dependent increase in blood pressure, but this was not correlated with the depres