

Supplementary Materials: The Dual Cardiovascular Effect of Centrally Administered Clonidine: A Comparative Study between Pentobarbital- and Ketamine/Xylazine-Anesthetized Rats

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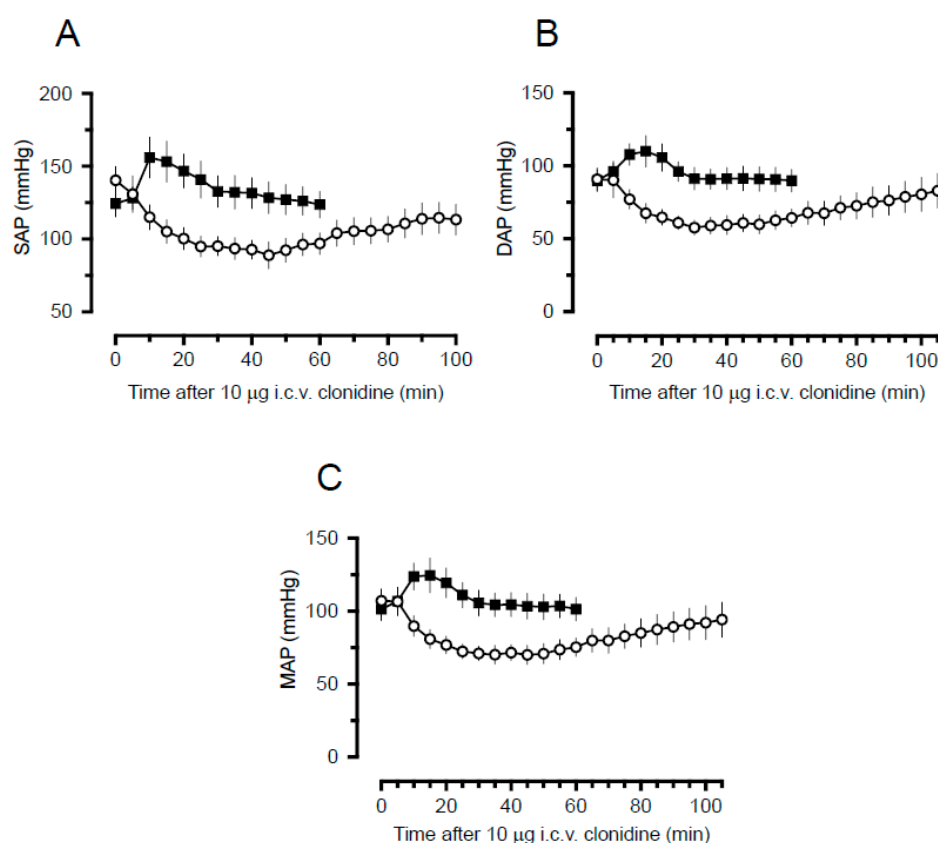


Figure S1. Differential influence of pentobarbital- and ketamine/xylazine-induced anesthesia in the vascular effects of centrally administered clonidine in rats. The results show the mean \pm standard error of the mean of the values of systolic (SAP, A), diastolic (DAP, B) and mean (MAP, C) arterial pressures recorded in animals subjected to pentobarbital- or ketamine/xylazine-induced general anesthesia, before (time "0") and after the intracerebroventricular (i.c.v.) injection of 10 µg clonidine. The values presented in this figure were used to calculate the changes in the SAP, DAP and MAP presented in Figures 2C, E and G of this study.

Table S1. Basal cardiovascular parameters in pentobarbital- and ketamine/xylazine-anesthetized rats.

	Pentobarbital (<i>n</i> = 5)	Ketamine/xylazine (<i>n</i> = 6)	<i>P</i> value
SAP (mmHg)	140.3 ± 9.6	124.3 ± 9.2	0.2623
DAP (mmHg)	90.9 ± 7.7	89.9 ± 7.5	0.9252
MAP (mmHg)	107.2 ± 8.2	101.4 ± 7.9	0.625
HR (bpm)	344.1 ± 10.8	259.9 ± 5.5	< 0.0001

The values show the mean ± standard error of the mean of the arterial pressure and heart rate obtained in animals anesthetized with pentobarbital (50 mg/kg, i.p.) or ketamine/xylazine combination (100/20 mg/kg, i.m.). SAP, systolic arterial pressure; DAP, diastolic arterial pressure; MAP, mean arterial pressure; HR, heart rate.

Table S2. Effects of the centrally administered clonidine in cardiovascular parameters of pentobarbital and ketamine/xylazine anesthetized rats.

	Pentobarbital (<i>n</i> = 5)	Ketamine/xylazine (<i>n</i> = 6)	<i>P</i> value
SAP (mmHg)	-54.0 ± 9.0	35.1 ± 7.0*	<0.0001
DAP (mmHg)	-35.5 ± 5.5	26.5 ± 4.2*	<0.0001
MAP (mmHg)	-40.7 ± 6.3	29.4 ± 5.1*	<0.0001
HR (bpm)	-133.7 ± 15	-33.6 ± 5*	<0.0001

The values show the mean ± standard error of the mean of the maximal effect of i.c.v. clonidine (10 µg/5 µL) in animals anesthetized with pentobarbital (50 mg/kg, i.p.) or ketamine/xylazine combination (100/20 mg/kg, i.m.). SAP, systolic arterial pressure; DAP, diastolic arterial pressure; MAP, mean arterial pressure; HR, heart rate. * indicates a value of *P* < 0.05, compared with the effect recorded in the pentobarbital group.

Table S3. Influence of yohimbine in the cardiovascular effect of intracerebroventricular clonidine and dexmedetomidine in ketamine/xylazine anesthetized rats.

	Before yohimbine (<i>n</i> = 6)	After yohimbine (<i>n</i> = 6)	<i>P</i> value
<i>Clonidine</i>			
SAP (mmHg)	30.5 ± 5.6	12.8 ± 2*	0.0098
DAP (mmHg)	23.7 ± 5.2	10 ± 2.3*	0.0359
MAP (mmHg)	23.5 ± 3.4	9.9 ± 2.3*	0.0033
HR (bpm)	-16.8 ± 6.6	17.7 ± 12.7	0.0544
<i>Dexmedetomidine</i>			
SAP (mmHg)	26.5 ± 3.5	7.4 ± 1.8*	0.0053
DAP (mmHg)	19.3 ± 3.8	6.4 ± 0.9*	0.0296
MAP (mmHg)	21 ± 3.7	6.7 ± 1.1*	0.0209
HR (bpm)	-50.8 ± 15.5	-23.7 ± 8.1	0.1449

The values show the mean ± standard error of the mean of the maximal effects of i.c.v. clonidine (10 µg/5 µL) and dexmedetomidine (0.6 µg/5 µL) in animals anesthetized with ketamine/xylazine combination (100/20 mg/kg, i.m.). In these experiments, the effects of clonidine and dexmedetomidine were recorded twice, before and 15 min after the i.c.v. administration of the α_{22} -adrenoceptor antagonist yohimbine (5 µg/5 µL). SAP, systolic arterial pressure; DAP, diastolic arterial pressure; MAP, mean arterial pressure; HR, heart rate. * indicates a value of *P* < 0.05, compared with the effect recorded before yohimbine.