5) Effects of clonidine in the Vertebral Artery (VA) in Spontaneously Hypertensive Rats (SHR) and Wister Rats (WR)
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There have been many reports concerning depressor mechanism of clonidine up to now, however there are still many unknown factors about depressor mechanism. We infused clonidine into the VA of SHR which dose should not cause pressor response administered systemically, and observed the BP and HR. Then we investigated the effects of previous treatment with yohimbine (α_2 -selective antagonist) and prazosin (α_1 -selective antagonist).

Materials and Method:

Fourteen to twenty weeks old male SHR and age matched WR were anesthetized with lightether, alpha-chloralose and pancronium. Under controlled ventilation, the chest was opened. After catheter was inserted into the VA, a small amount of clonidine (3-5 μ g/100g), yohimbine (1-10 μ g/100g) and prazosin (0.5 μ g/100g) were infused from the catheter.

Results:

VA injection of clonidine led to initial hypertension and followed secondary decrease in BP. Same reaction was recognized in WR, but it was not clearer than that of SHR. Bradicardic tendency with hypotension were indicated. The depressor and pressor of SHR and WR were suppressed by previous treatment with yohimbine and prazosin into the VA.

Conclusions:

These experiments have demonstrated that there are α_1 and α_2 -receptor in the area by perfused VA. And also this results suggested that there were central pressor mechanism in the area by perfused VA.