CANAVALIA GLADIATA E CANAVALIA BRASILIENSIS LECTINS INDUCE RELAXATION ON VASCULAR SMOOTH MUSCLE

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Leguminous lectins of structural similarities modulate different physiopathological processes. ConA and Canavalia maritima lectin induce relaxation in vascular smooth muscle dependent on endothelium and C brasiliensis lectin produces NO in vitro. The effect of C. gladiata (CgL) and C. brasiliensis (ConBr) lectins was evaluated on aorta. Aortic rings from male Wistar rats (200-300g) were mounted in organic bath under physiological conditions and its contractile response was measured. Lectins, purified by affinity chromatography, were added (10-100µg/mL) both in aorta with or without endothelium, pre-contracted with phenylephrine (0.1µM). To evaluate the participation of endothelial relaxant factors, tissue was preincubated with L-NAME (100µM), indomethacin (10µM) or TEA (5mM). ANOVA and Student t test, $p < 0.05$. CgL and ConBr induced relaxation (30µg/mL; 100µg/mL) in endothelized aorta. The CgL effect (48.48±8.08%; 80.89±12.98%) was blocked by L-NAME (22.39 ± 7.46%; 18.1 ± 4.57%). ConBr effect (49.4 ± 9.05%; 78.14 ± 10.13%) was completely blocked by L-NAME and partially by indomethacin (21.35 ± 12.98; 43.1 ± 12.97%). Despite structural similarities, lectins showed differences in the mechanism of its vasorelaxant effect. ConBr relaxation depends on NO and prostacyclin, while the CgL effect depends on NO only.