

Episcleral Venous Pressure Responses to Topical Nitroprusside and N-Nitro-L-arginine Methyl Ester.

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PURPOSE: To determine the episcleral venous pressure (EVP) responses to nitroprusside (NP) and I-NAME. **Methods.** In anesthetized rabbits (n = 36), arterial pressure and IOP were measured by direct cannulation, and carotid blood flow and heart rate were measured with an ultrasound flowmeter and cardiometer. EVP was measured in two groups with a servonull system.

Group 1 (n = 13) was given NP (50 μ L, 10 mg/mL). Group 2 (n = 10) was given I-NAME (100 μ L, 10 mg/mL) followed by NP (50 μ L, 10 mg/mL). In group 3 (n = 13), fluorophotometric aqueous flow was measured before and after NP (100 μ L, 10 mg/mL).

RESULTS: Systemic parameters were unaffected by treatment in all groups. In group 1, NP increased EVP from 9.1 \pm 0.6 to 11.6 \pm 0.8 mm Hg (P 0.05 versus baseline). In group 3, NP increased IOP from 16.6 \pm 0.7 to 20.0 \pm 0.9 mm Hg (P 0.05).

CONCLUSIONS: Because a topical NO donor raises EVP and a topical NO synthase inhibitor lowers EVP, the authors conclude that EVP is modulated by NO.

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