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Plasma catecholamine and cardiovascular response to nifedipine ii

## Abstract

### See 1 citation found using an alternative search:

Arzneimittelforschung. 1989 Dec;39(12):1593-6.

## Plasma catecholamine and cardiovascular responses to nifedipine in hypertensives WHO-stage II.

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### Abstract

77 patients with arterial hypertension were consecutively examined. An evaluable echocardiogram could be recorded for 75 patients. 54 (72%) had non-pathological cardiac findings, 15 (20%) showed concentric left ventricular hypertrophy of the heart (mean left ventricular muscle mass (LVM) 2.5 g/kg or 113 g/m<sup>2</sup>; mean LVM/EDV 1.6 g/ml). 6 patients had an excentric hypertrophy of the left ventricle (8%). The influence of 10 mg nifedipine (Adalat) sublingual on the heart, blood pressure and sympathetic activity was examined in 15 patients with left ventricular hypertrophy of the heart. 5-10 min after administration, a significant decrease in systolic and diastolic pressures (p less than 0.05) and an increase in plasma noradrenaline (p less than 0.05) and heart rate (p less than 0.01) could be registered. The thickness of the posterior wall and septum decreased in 8 to 10 of the 15 patients, EDV, shortening fraction and ejection fraction increased in 8 of the 15 patients. A reduction in peripheral resistance, sympathetic counterregulation accompanied by an increase in heart rate, shortening and ejection fractions with increased enddiastolic volume and decrease in wall thickness can be observed as the gross effect in the majority of the 15 patients with left ventricular concentric hypertrophy. The decrease in wall thickness as a relaxation effect should not be confused with a regression of hypertrophy, whereby the mass-volume ratio shifts toward the normal range under nifedipine.

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