

ABSTRACT

Title: CONTROL OF CARDIOVASCULAR RISK FACTORS IN HYPERTENSIVE PATIENTS. EFFECT OF A FORMATION PROGRAM

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Abstract: **OBJECTIVE:** To evaluate the effect of a quality improvement intervention in the control of cardiovascular risk factors of hypertensive patients.

METHODS: This controlled study included 2 Primary Care Centers in Spain. One centre was assigned to receive a quality improvement intervention (n = 482 hypertensive patients, 64% females, mean age 61.4 years (SD 6.8)), while the other centre (control group) was assigned to a "usual care" control (n = 360 hypertensive patients, 63% females, mean age 60.7, (SD 7.4)). Quality improvement intervention was determined using a combined program including: audit, feed-back, formation sessions, and implemented guidelines (JNC VI, OMS 99, European Joint Task Force) with the medical personnel during 6 months. Systolic and diastolic blood pressure (BP), smoking, total cholesterol (TC), LDL-cholesterol (LDL-C), and body mass index (BMI), previous and one year after the intervention were analyzed.

RESULTS: Patients had similar baseline characteristics in the intervention and control groups. The BP decreased from 143.2/88.5 to 140.5/85.6 mmHg ($p < 0.05$) in the intervention group, while no difference was observed in the control group (142.1/88.6 to 142.8/87.9 mmHg. The effect of the intervention achieved was a decreased in systolic BP of 3.5 mm Hg (CI 95%:1.6-5.3) and of 2.5 mmHg (CI 95%:1.3-3.8) in diastolic BP. Adequate BP control increased significantly in the intervention group (29% to 41%; $p < 0.05$), while no effect was achieved in the control group (31% to 30%; $p = \text{NS}$). The intervention had mixed effects on the other 3 risk factors studied that were not statistically significant. Although the magnitude in the decrease of TC and LDL-C, was superior in the intervention (7.22 mg/dl in TC and 14.6 mg/dl in the LDL-C) than in the control group (5.22 mg/dl for TC and 8.22 mg/dl for LDL-C) no statistical difference was found. The effects of the intervention were non-significant changes in the percentage of smokers (10.9% to 10.3%) and BMI (29.5 to 29.8) with similar results in the control group; smokers (10.1%

to 10.4%) and BMI (29.5 to 29.7).

CONCLUSIONS: The effect of a quality improvement intervention in the control of cardiovascular risk factors among hypertensive patients was small and limited to a slightly, but not significantly, decrease in cholesterol and smoking. However, a significant decrease in systolic and diastolic BP and in the percentage of adequate BP control was achieved