

Aspects on outcome and costs in the management of elderly hypertensives

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Abstract

STOP Hypertension-2 is a major and classical large intervention trial in middle-aged and elderly patients. It investigated the effect of different pharmacological treatments to prevent cardiovascular complications related to hypertension.

STOP Hypertension-2 was initiated 1992 and 6628 patients with hypertension were included. The study was set up to compare "newer" treatment, e.g. ACE inhibitors and calcium channel blockers with "conventional" treatment alternatives e.g. diuretics and beta blockers. Primary endpoint was cardiovascular mortality. Several secondary endpoints such as cardiovascular morbidity, incidence of cancer and costs were evaluated. In the main study (n=6614) no differences between "newer" and "conventional" treatment regarding cardiovascular mortality was seen.

In STOP Hypertension-2, no increased cancer risk was found in the elderly hypertensives. Importantly there was no difference between patients randomised to "newer" (ACE inhibitors and calcium antagonists) treatment or to "conventional" (betablockers and diuretics) treatment.

In all, 719 patients with diabetes mellitus at the start of the study were analysed in a separate sub study. In terms of cardiovascular mortality, "newer" and "conventional" treatment did not differ in this group of elderly hypertensive patients. However there were fewer cases of myocardial infarctions in patients randomised to ACE inhibitors as compared to a calcium antagonist.

In a subgroup (n=2280) of STOP Hypertension-2 patients with systolic hypertension (≥ 160 and < 95 mm Hg) a more pronounced reduction of stroke (fatal and non-fatal stroke) was seen in patients randomised to "newer" treatment as compared to "conventional" treatment. Surprisingly, the stroke preventive effect was seen in spite of a higher incidence of atrial fibrillation (AF).

In another sub study (n=303), a detailed cost analysis was performed. Three different kinds of costs were analysed, protocol driven costs, non protocol driven costs and drug treatment costs. We found that costs for drug treatment *per se* was lower for patients randomised to "conventional" treatment compared to the two "newer" treatment alternatives.

STOP Hypertension-2 allowed an analysis of predictors for high risk as well as and low costs of institutional care (hospital and nursing home). Importantly indices of target organ damage (TOD) as well as associated clinical conditions (ACC) emerged as the most important cost-driving factors in this group of elderly hypertensives.

Key words: STOP Hypertension-2, hypertension, elderly, treatment, diuretics, betablockers, calcium antagonists, ACE inhibitors, costs, health economics.

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