

health technology assessment



EXECUTIVE SUMMARY

MANAGEMENT OF MODERATELY ELEVATED BLOOD PRESSURE

HEALTH TECHNOLOGY ASSESSMENT UNIT
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EXECUTIVE SUMMARY

1 INTRODUCTION

Hypertension is highly prevalent in both developed and developing countries. Persistent elevation of diastolic blood pressure by 5 mm Hg was associated with 34 % increased risk of stroke and a 21 % increased risk of coronary heart disease (MacMahon et al 1990). In Malaysia, it was found that many patients who have hypertension are under-diagnosed. 30% of them have never been diagnosed and present themselves to hospitals when complications arise. The findings from the National Health and Morbidity Survey are that 41% of hypertensive patients have never been on medication and present with life-threatening complications like stroke, heart disease, heart failure and kidney failure (Ministry of Health, 1997).

2. OBJECTIVES:

To study the effectiveness, safety, ethical, legal and cost implications of management of moderately elevated blood pressure

3. FINDINGS

There is sufficient evidence to indicate that moderately elevated blood pressure or mild hypertension should be diagnosed when the diastolic blood pressure is more than 90 mm Hg or systolic blood pressure exceeds 140 mm Hg.

The diagnosis of moderately elevated BP depends on the accurate measurement of blood pressure, taking into account physiological variations and other possible causes of elevated blood pressure. Individuals with borderline BP readings should have their BP monitored for at least 3-6 months before commencing therapy.

Treatment should begin with non-pharmacological interventions. There is evidence that drug therapy is beneficial in high risk subjects high normal BP of 130-139/85-89 mm Hg. However, for other patients the initiation of drug therapy will depend on the presence of risk factors, and the degree of blood pressure lowering achieved with non-pharmacological measures. These measures should be continued for at least 3 months for medium risk group patients, and for 6 months for low risk groups, before drug treatment is considered.

For non-pharmacological interventions, there is evidence of benefit of weight reduction, some evidence of benefit of sodium restriction, inconclusive evidence on potassium and calcium intake, some evidence on the benefit of a low fat diet rich in vegetables and fruits, good evidence of benefit of reduction of alcohol consumption, no evidence on benefit of stopping smoking, good evidence on benefit of exercise, and some evidence of benefit of combinations of non-pharmacological interventions.

For pharmacological treatment, diuretics, beta-blockers angiotensin-receptor blockers, angiotensin converting enzyme inhibitors, calcium channel blockers have been found to be effective in the treatment of moderately elevated blood pressure.

4. RECOMMENDATION

A diagnosis of moderately elevated blood pressure or mild hypertension should be made if the systolic blood pressure exceeds 140 mm Hg or the diastolic blood pressure is more than 90 mm Hg. The blood pressure must be accurately measured, and further confirmed by monitoring the blood pressure. Management of these patients would depend on the level of blood pressure risk factors. Non-pharmacological interventions should be attempted before initiating therapy with drugs.