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Hypertension – some practical facts

These few facts are designed to help us in treating our patients' risk factors. Bear in mind that the most effective therapy prescribed by the most careful clinician will control hypertension only if patients are sufficiently motivated. The clinician plays an essential role within this aspect.

Hypertension (HT) is a cardiocerebrovascular risk factor.

It increases the risk of stroke (particularly ischaemic over haemorrhagic cerebral infarction), more than the risk of myocardial infarction. This concept, not reported in the older meta-analysis by MacMahon and Collins probably because of imprecise criteria in several of the older included trials, was revealed by the analysis by Kjeldsen and by the LIFE study.

Risk correlates directly with raised blood pressure.

Increased cardiovascular morbidity and mortality is directly and continuously correlated with blood pressure (BP) beyond a value of 115/75mmHg. This was demonstrated by the PSC study based on 61 prospective observational studies including one million adults initially free of cardiovascular disease; with a follow-up of 12.7 million subject-years it confirmed the continuous correlation between cardiovascular risk and blood pressure beyond a diastolic pressure of 75mmHg; a 20mmHg difference in systolic blood pressure (SBP) has the same consequence as a 10mmHg difference in diastolic blood pressure (DBP).

This continuous correlation between BP and cardiovascular risk does not allow the definition of a precise cut-off value for hypertension.

Systolic BP best indicator beyond age 50

After the age of 50 and especially in elderly patients, SBP is a better indicator of cardiovascular risk than DBP. This is because DBP tends to decrease physiologically after the age of 50-55 years.

HT treatment improves cardiovascular prognosis

It has been shown since the Framingham study that treatment of HT improves the prognosis associated with all forms of HT, that is, malignant hypertension (DBP >140mmHg associated with neurological and/or cardiac and/or renal lesions and/or ocular fundus lesions), severe HT (SBP > or = 180mmHg or DBP > or = 110mmHg) or even mild-to-moderate HT (SBP between 140-149mmHg or DBP between 90-109mmHg).

Stroke risk reduces most

In primary prevention, lowering of peripheral SBP/DBP decreases the risk of stroke to a much greater extent than the risk of coronary events. According to the meta-analysis by Collins, any anti-hypertensive therapy able to reduce DBP by 5-6mmHg could decrease the 5-year risk of stroke by 50% and the 5-year risk of coronary events by about 20% (or even 30%, beyond 5 years).

Improvement proportional to BP lowering

Anti-hypertensive therapy improves the prognosis proportional to the reduction of blood pressure figures. This was demonstrated by the HDFP, HOT and BBB studies and confirmed by the BPLTTC meta-analysis.

In the first cycle of the BPLTTC meta-analysis of 15 large trials comprising 74,696 hypertensive patients, intensive vs more moderate anti-hypertensive therapy significantly reduced the relative risk of stroke by 20%, that of coronary disease by 19% and that of a major cardiovascular event by 15%, without modifying the risk of cardiovascular or all-cause mortality. In the second cycle of this meta-analysis of 14 large trials comprising 87,669 hypertensive patients, stricter blood pressure control more markedly decreased the number of strokes and all cardiovascular events. ■

Ref: Article by Robert Haiat and Gerard Leroy 2009.

