G-CH-4

DRUG UTILISATION IN A HYPERTENSION OUTPATIENT CLINIC 1996-1999

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Objectives: We previously studied drug utilisation in 246 hypertensive patients in a Hypertension Clinic in 1996, before the publication of JNC VI guidelines, Syst-Eur and HOT studies. We repeated the study in 1998 to detect changes in drug usage.

Methods: 452 hypertensive outpatients (238M, 214F; 54± 13 yrs) were seen in Oct 98-Mar 99. Case notes were reviewed. Current medications and blood pressure were recorded.

Results: In 1998-9, 54% received calcium channel blockers (CCB); 52%, beta-blockers (BB); 25%, angiotensin-converting enzyme inhibitors (ACEI); 21%, thiazide diuretics (D) and 3%, alpha-blockers (α). In 1996, the respective figures were 51% CCB, 47% BB, 32% ACEI, 15% D and 5% α. The percentage of patients prescribed no drugs (life-style modification), 1 drug (monotherapy), 2, 3 and >3 drugs were 10%, 36%, 41%, 11% and 2% respectively (7%, 48%, 35%, 7% and 2% respectively in 1996). The leading regimes were, in decreasing order, CCB+BB, CCB, BB and ACEI monotherapy (CCB, CCB+BB, BB, ACEI in 1996). Compared to 1996, fewer patients were on monotherapy, but CCB and BB remained the most popular drugs. The blood pressure on treatment for all patients was 144.5±0.9 / 83.1±0.5 mmHg. Patients treated with a CCB had lower diastolic pressures than those without CCB (81.7±0.7 mmHg vs. 84.7±0.8 mmHg, $p<0.01$). Only 7% were taking aspirin.

Conclusions: Currently, combination therapy is often used to control blood pressure. Many patients achieve the ideal blood pressures suggested in HOT. The popularity of calcium channel blockers is justified by its blood pressure-lowering efficacy and new data from clinical trials (Syst-Eur, Syst-China, STOP-hypertension-2). However, aspirin (shown to be beneficial in HOT), ACEIs (beneficial in HOPE) and diuretics (as good as ACEIs or CCBs in STOP-hypertension-2 but inexpensive) are underused.

G-CH-5

PLASMA ADRENOMEDLLIN LEVEL IS MARKEDLY ELEVATED IN BRONCHIECTASIS

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Objectives: Adrenomedullin (AM) is a peptide hormone first isolated from phaeochromocytoma and the adrenal medulla. In the lungs, AM is expressed in many cell types, including bronchial epithelium, bronchial smooth muscles, pulmonary vasculature and macrophages. We previously reported elevation in the plasma levels of AM in asthma and in chronic obstructive airway disease. Since cytokines including TNF-α and IL-1β stimulate AM secretion, we studied patients with bronchiectasis, a disease characterised by inflammation and infection which interact to cause cytokine-mediated progressive destruction of the airway.

Methods: 87 bronchiectasis patients (27 M, 60 F; age 62± 14 yrs) and 24 normal healthy subjects were studied. The immunoreactivity of human AM in the plasma was measured using a specific radioimmunoassay (lower limit of detection 1 pg/tube, coefficient of variation 12%).

Results: The mean ± SE plasma AM level in normal subjects was 11.9± 18.4 pmol/l and was 133.2± 19.0 pmol/l in bronchiectasis patients ($p<0.001$). The increase in plasma AM level was not explained by known factors including hypertension, renal dysfunction and liver disease. AM levels were not related to age or gender. In a subgroup of 43 patients in whom baseline measurements before treatment were available, AM level correlated with ESR ($r=0.38$, $p=0.01$) and α1-antitrypsin ($r=0.41$, $p<0.01$).

Conclusions: The AM levels in bronchiectasis are among the highest we have observed in man, and considerably higher than the AM levels encountered in heart failure, liver cirrhosis or renal failure. Elevated plasma AM level in patients with bronchiectasis and the positive correlation with disease activity suggest that AM may be involved in the pathophysiology of bronchiectasis.