AstraZeneca

STUDY REPORT SUMMARY

ASTRAZENECA PHARMACEUTICALS

FINISHED PRODUCT: No applicable
ACTIVE INGREDIENT: No applicable

Study No: NIS-CFR-DUM-2007/5
Prophyl Hospital - profile of hypertensive patients managed in hospital outpatient clinics

Developmental phase: No applicable
Study Completion Date: LSLV = 29 September 2008
Date of Report: 14 September 2009

OBJECTIVES:

This survey, conducted during 2008, was designed to describe the characteristics of hypertensive patients consulting a hospital cardiology or nephrology department, regardless of the presenting complaint, and more particularly the cardiovascular history, any target organ lesions, or concomitant clinical conditions explaining why these patients are followed in hospital.
It was also designed to describe the impact of risk factors, target organ lesions and cardiovascular events on the modalities of management of HT as well as the factors influencing the choice of treatment, the mode of follow-up, or the hypertensive patient's management trajectory.

METHODS AND RESULTS:

A total of 132 doctors with a mean age of 46.8 ± 9.0 years participated in this study: 92 cardiologists (76.7%) and 28 nephrologists (23.3%), (12 physicians did not report their speciality).

Study population
The population studied and analysed comprised 639 treated or non-treated hypertensive patients with a mean age of 64.8 years, with 59% of males.

46.6% of subjects of the survey were regularly followed up for their hypertension.
The diagnosis of HT had been made during the previous 5 years for 29.2% of patients, between 5 and 10 years for 29.5% of patients and for more than 10 years for 41.3% of

patients; 18.6% of patients had already been hospitalised for HT; 18.5% of patients had secondary hypertension.

Cardiovascular risk level and comorbidities

The cardiovascular risk level (evaluated according to HAS 2005 criteria) was high for 49.0% of patients and moderate for 47.3%.

More than 90% of patients had at least one cardiovascular risk factor: hypercholesterolaemia: 60.2%, diabetes: 33.1%, smoking: 16.5% and family history of early vascular accident: (9.8%). The majority of patients were overweight: mean body mass index of 28.2 kg/m^2 (± 5.4) with a large abdominal circumference, greater than 88 cm in 72.1% of women and greater than 102 cm in 45.7% of men.

More than one third of patients (41.9%) had a history of at least one cardiovascular event: coronary artery disease: 26.8% complicated by myocardial infarction: 14.5%, heart failure: 14.5%, arterial disease of the lower limbs: 10.9% and stroke: 7.4%. The presence of a history of cardiovascular event was correlated with age (68.4 ± 10.8 years with vs 62.5 ± 14.4 years without).

Almost one half of patients (48.0%) had at least one associated comorbidity; 26.9% of patients had renal failure.

One quarter of patients (24.4%) had echocardiographic signs of left ventricular hypertrophy (LVH) and 18.8% had ECG signs of LVH. LVEF was measured in more than one half of patients (54.9%). 7.7% of patients had an LVEF< 40%

Blood pressure

A total of 213 patients (34.1%) had already performed self-monitoring of blood pressure and 203 patients (32.9%) had performed ambulant blood pressure monitoring (ABPM). Self-monitoring of blood pressure was more frequent in regularly followed patients (36.1% vs 32.3% in patients who were followed only occasionally).

At the time of the visit, more than two-thirds of patients (63.2%) had not achieved the blood pressure goal (140/90 mmHg), more than 70% of high-risk patients and up to 89.3% of patients with renal failure and/or diabetes (49.5% of hypertensive patients) (goal: 130/80 mmHg).

Table 1 - Risk factors as a function of blood pressure

		Total N = 637	BP < 130/80 N = 165	BP 130-139/ 80-89 N = 52	BP 140-159/ 90-99 N = 322	BP 160-179/ 100-109 N = 79	BP >= 180/110 N = 19
Factors	0 associated RF	41 (6.4%)	11 (6.7%)	5 (9.6%)	20 (6.2%)	5 (6.3%)	0 (0.0%)
	1 to 2 RF associated	398 (62.5%)	101 (61.2%)	31 (59.6%)	202 (62.7%)	49 (62.0%)	15 (78.9%)
	>=3 RFs and/or target organ lesion and/or diabetes	198 (31.0%)	53 (32.1%)	16 (30.8%)	100 (31.1%)	25 (31.6%)	4 (21.1%)

2 patients had arterial blood pressure that could not be categorized (637 + 2 = 639).
Percentages were calculated for each range of blood pressure.

Tableau 2 – Cardiovascular and renal disease as a function of blood pressure

	Total N = 637	PA < 130/80	BP 130-139/ 80-89	BP 140-159/ 90-99	BP 160-179/ 100-109	BP >= 180/110
Cardiovascular and renal disease	352 (55.2%)	100 (15.7%)	21 (3.3%)	181 (28.4%)	38 (6.0%)	12 (1.9%)

2 patients had arterial blood pressure that could not be categorized (637 + 2 = 639).
Percentages were calculated on the total population of 637 patients.

Management trajectory (follow-up and presenting complaint)

Almost one half of patients (53.4%) were followed irregularly; the majority (80.2%) had been referred by their general practitioner for a specialist opinion.
Patients with irregular follow-up had a lower cardiovascular risk level than those followed regularly (42.7% vs 56.5% at high risk, **p=0.004**) and less frequently presented renal failure (24.7% vs 29.4% **p=0.018**).

In these patients, all hypertensive with or without treatment, the main presenting complaint (74.9%) was hypertension. Almost one half of patients consulted for management of an associated cardiovascular disease (43.1%) or another chronic disease (35.6%) and rarely for an acute event (6.3%). Patients who consulted for an associated cardiovascular disease were older than patients who consulted for hypertension (68.4 ± 10.0 years vs 62.5 ± 14.4 years, **p<0.001**). The cardiovascular risk level was higher in patients who consulted for a reason other than hypertension (high level in 58.9% vs 44.3% in patients consulting for hypertension; **p=0.004**).

Almost all (97%) patients were to be reviewed in 6 months, including 33.6% during the month following the visit.

Drug treatment

On arrival at the visit, 90.0% of patients were taking antihypertensives. 23.6% were taking monotherapy, 26.8% were taking dual therapy and 39.6% were taking triple therapy (or more). 125 patients (21.0%) had HT refractory to more than 3 antihypertensive drugs.

High-risk patients were more often taking 3 or more antihypertensive drugs (53.9%) than intermediate-risk (45.2%) or low-risk patients (0.9%).

A total of 48,5% of renal failure and/or diabetic patients were taking 3 or more antihypertensive drugs versus 31.7% of patients without renal failure or diabetes.
32.0% of patients without renal failure or diabetes taking 3 or more antihypertensive drugs had achieved blood pressure goals versus 12.7% of renal failure and/or diabetic patients.
The five classes of antihypertensive drugs most frequently prescribed were diuretics (50.7%), beta-blockers (43.7%), calcium channel blockers (35.8%), ACE inhibitors (34.7%) and ARBs (34.6%).

The choice of therapeutic class was not influenced by the type of risk factor or by the type of comorbidity with the exception of patients with coronary artery disease, who were more frequently treated by ACE inhibitors and beta-blockers.

Patients treated with diuretics, angiotensin II receptor blockers or centrally acting antihypertensives were generally older. Patients treated with angiotensin II receptor blockers, calcium channel blockers or centrally acting antihypertensives more frequently presented renal failure. Patients treated with diuretics, angiotensin-converting enzyme inhibitors, or beta-blockers more frequently presented heart failure.

The main reason for modification of the HT management strategy was the insufficient efficacy of the current treatment on blood pressure (37.4%). The other reasons for modification of management were less common (< 6%). Dose reductions were rare. Doses were either increased or treatment was stopped. The doses of ARBs were usually increased (94.3% increased vs 1.9% decreased and 3.8% stopped), as were those of loop diuretics (80.9% increased vs 4.8% decreased and 14.3% stopped), while the other antihypertensive drugs were more frequently stopped (potassium-sparing diuretics, centrally acting antihypertensives, ACE inhibitors, alpha-blockers and, to a lesser degree, thiazide diuretics and beta-blockers).

At the end of the visit, 95.0% of patients were treated by antihypertensive drugs. The proportion of patients on combination therapy had increased to 30.2% on dual therapy and 45.9% on triple (or more) therapy.

Subsequent follow-up

At the end of visit, the examinations more commonly ordered were electrocardiogram, for 49.8% of patients of the survey, self-monitoring of blood pressure (36.3%),

echocardiography (32.2%), 24-hour proteinuria (30.8%), albuminuria (27.6%) and ABPM (25.2%).