

STUDY REPORT SUMMARY

ASTRAZENECA PHARMACEUTICALS

FINISHED PRODUCT: No applicable

ACTIVE INGREDIENT: No applicable

Study No: NIS-CFR-DUM-2007/6

Prophyl Cardiology - profile of hypertensive patients managed by private cardiologists
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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 improve our knowledge of the population of hypertensive patients managed by private cardiologists, according to their type of practice (exclusively private practice or mixed hospital/private practice). It also evaluated the impact of the hypertensive patient's profile (sociodemographic data, risk factors, clinical data, target organ lesions and history of cardiovascular events) on the modalities of management (management trajectory, treatment, examinations performed).

METHODS AND RESULTS:

Almost 600 cardiologists with a mean age of 51.6 years (± 8.1) participated in the survey. They were recruited from all over France and 60.5% of them were exclusively private practitioners.

Study population

The total population studied and analysed was 1,781 treated or non-treated hypertensive patients with a mean age of 65.2 years (± 11.7) with 58% of males.

The diagnosis of hypertension had been made more than 10 years ago for one third of patients, 5 to 10 years ago for another third and during the previous 5 years for the remaining third. Only 2.3% of patients had secondary hypertension.

Cardiovascular risk level and comorbidities

The cardiovascular risk level (evaluated according to HAS 2005 criteria) was high for 41.5% of patients and moderate for 54.8%.

More than 90% of patients had at least one cardiovascular risk factor: hypercholesterolaemia: 58.4%, diabetes: 24.3%, family history of early vascular accident: 18.6% and smoking: 16.6%. The majority of patients were overweight: mean body mass index of 27.7 kg/m² (\pm 4.6) with a large abdominal circumference, greater than 88 cm in 61.0% of women and greater than 102 cm in 47.0% of men.

One third of patients (31.4%) had a history of at least one cardiovascular event: coronary artery disease: 18.6%, uncomplicated or complicated by myocardial infarction: 7%, heart failure: 8.1%, arterial disease of the lower limbs: 7.0% and stroke: 6.1%. The presence of a history of cardiovascular event was correlated with age (69.9 ± 10.1 years with vs 62.4 ± 11.9 years without, **p<0.001**).

One third of patients (30.2%) had at least one associated comorbidity with renal failure in 7.5% of cases and retinopathy in 3% of cases.

The presence of proteinuria or microalbuminuria had been investigated in 41.7% of cases.

One third of patients had echocardiographic signs of left ventricular hypertrophy (LVH) and 17.1% had ECG signs of LVH. LVEF was measured in about 2/3 of patients. Less than 2% of patients had an LVEF< 40%.

Blood pressure

568 patients (32.3%) had already performed self-monitoring of blood pressure and 627 patients (35.6%) had performed ambulant blood pressure monitoring (ABPM). Self-monitoring of blood pressure and ABPM were more frequent in regularly followed patients than in new patients: 33.9% vs 28.0%; **p<0.001** and 39.8% vs 24.4%; **p<0.001**, respectively.

At the time of the visit, 66.4% of patients had not achieved the blood pressure goal (140/90 mmHg), more than 70% of high-risk patients and up to 91.4% of patients with renal failure and/or diabetes (goal: 130/80 mmHg).

Table 1 - Risk factors as a function of blood pressure

	Total N = 1774	BP < 130/80 N = 323	BP 130-139/ 80-89 N = 259	BP 140-159/ 90-99 N = 881	BP 160-179/ 100-109 N = 278	BP >= 180/110 N = 33
Facteurs						
0 associated RF	119 (6.7%)	26 (8.0%)	19 (7.3%)	50 (5.7%)	19 (6.8%)	5 (15.2%)
1 to 2 associated RFs	1124 (63.4%)	206 (63.8%)	166 (64.1%)	550 (62.4%)	184 (66.2%)	18 (54.5%)
>=3 RFs and/or target organ lesion and/or diabetes	531 (29.9%)	91 (28.2%)	74 (28.6%)	281 (31.9%)	75 (27.0%)	10 (30.3%)

7 patients had arterial blood pressure that could not be categorized (1774 + 7 = 1781). Percentages were calculated for each range of blood pressure.

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

	Total N = 1774	BP < 130/80	BP 130-139/ 80-89	BP 140-159/ 90-99	BP 160-179/ 100-109	BP >= 180/110
Cardiovascular and renal disease	564 (31.8%)	104 (5.8%)	75 (4.2%)	286 (16.1%)	90 (5.1%)	9 (0.5%)

7 patients had arterial blood pressure that could not be categorized (1774 + 7 = 1781). Percentages were calculated on the total population of 1774 patients.

Correlation between the patient's profile and the cardiologist's type of practice

The cardiologist's type of practice (mixed or exclusively private) was not correlated with the patient's cardiovascular risk level ($p = 0.191$).

Management trajectory (follow-up and presenting complaint)

Less than one third of patients (27.3%) were consulting for the first time; the majority (87.7%) had been referred by their general practitioner for a specialist opinion. They were younger than the regularly followed patients (60.3 ± 11.5 years vs 67.0 ± 11.3 years, $p < 0.001$).

New patients had a lower cardiovascular risk level than those patients already followed by the cardiologist (32.1% vs 45.9% of high risk, $p < 0.001$) and less frequently presented renal failure (3.7% vs 8.9% $p < 0.001$).

In these patients, all being hypertensive with or without treatment, the main presenting complaint ($> 80\%$) was hypertension. Almost one half of patients consulted for management of an associated cardiovascular disease (40%) or another chronic disease (12.9%) and rarely for an acute event ($< 2\%$). Patients who consulted for an associated cardiovascular disease were older than patients who consulted for hypertension (69.9 ± 10.1 years vs 62.4 ± 11.9 years, $p < 0.001$). Overall, 7.7% of patients had already been hospitalised for HT.

80% of patients were to be reviewed in 6 months, including 40% during the month following the visit.

Drug treatment

On arrival at the visit, 87.6% of patients were taking antihypertensives. 23.8% were taking monotherapy, 31.3% were taking dual therapy and 32.5% were taking triple (or more) therapy. 223 patients had HT refractory to more than 3 antihypertensive drugs.

High-risk patients were more often taking 3 or more antihypertensive drugs (54.0%) than intermediate-risk (44.9%) or low-risk patients (1.1%).

A total of 47.4% of renal failure and/or diabetic patients were taking 3 or more antihypertensive drugs versus 26.6% of patients without renal failure or diabetes.

40.4% of patients without renal failure or diabetes taking 3 or more antihypertensive drugs had achieved blood pressure goals versus 10.5% of renal failure and/or diabetic patients.

The five classes of antihypertensive drugs most frequently prescribed were diuretics (47.8%), ARBs (44.1%), beta-blockers (36.0%), calcium channel blockers (34.9%) and ACE inhibitors (22.6%).

The choice of therapeutic class did not appear to be influenced by either the type of risk factor or the type of comorbidity.

Patients with coronary artery disease with or without myocardial infarction were more often treated with ACE inhibitors and beta-blockers.

Patients treated with diuretics, ACE inhibitors, beta-blockers or calcium channel blockers were older and more often presented diabetes, dyslipidaemia or a history of cardiovascular disease (heart failure, coronary artery disease, myocardial infarction, stroke, arterial disease of the lower limbs) than those not treated with these antihypertensive drugs.

The main reason for modification of the HT management strategy was the insufficient efficacy of the current treatment on blood pressure (40.0%). The other reasons for modification of management were less common (< 5%). Dose reductions were rare. Doses were either increased or treatment was stopped. The doses of ARBs were usually increased (94.5% increased vs 2.2% decreased and 3.3% stopped), as were those of beta-blockers (55.0% increased vs 11.3% decreased and 33.8% stopped), while the other antihypertensive drugs were more frequently stopped (alpha-blockers, centrally acting antihypertensives, potassium sparing diuretics and, to a lesser degree, loop diuretics, ACE inhibitors).

At the end of the visit, 97.6% of patients were treated by antihypertensive drugs. The proportion of patients on combination therapy was increased: 32.8% on dual therapy and 41.3% on triple (or more) therapy.

Subsequent follow-up

At the end of visit, the examinations more commonly ordered were electrocardiogram, for 86.2% of patients of the survey, echocardiography (47.3%), self-monitoring of blood pressure (28.4%), ABPM (19.4%), determination of albuminuria (10.9%) and 24-hour proteinuria (10.6%).

