



ORIGINAL ARTICLE

Initial therapeutic choices for hypertension in the Portuguese Sentinel Practice Network



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KEYWORDS

Hypertension;
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agents;
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Abstract

Introduction and Objectives: Finding out which drugs are chosen to treat incident cases of hypertension may help in interpreting prevalent use of antihypertensive agents. We aimed to determine the proportion of patients who begin treatment with each antihypertensive drug class, which physicians initiate treatment and whether family physicians alter prescriptions initiated by others, and to compare the prescribing patterns of family physicians and other specialists.

Methods: In this cohort-nested cross-sectional study between 2014 and 2015 within the Portuguese Sentinel Practice Network, family physicians notified incident cases of hypertension, reporting treatment, who issued the initial prescription and whether treatments initiated by other physicians were changed.

Results: A total of 681 incident cases were notified. The initial prescription was issued by the patient's family physician in 86.9% of cases (95% CI: 84.2-89.3%). The most frequently used agents were angiotensin-converting enzyme inhibitors (51.3% of patients, 95% CI: 47.5-55.0%), thiazide and thiazide-like diuretics (32.2%, 95% CI: 28.8-35.8%), and angiotensin receptor blockers (21.4%, 95% CI: 18.5-24.7%). Compared to other specialists, family physicians used less beta-blockers (20.4 vs. 5.9%, $p < 0.001$) and loop diuretics (8.2 vs. 0.8%, $p = 0.003$). Prescriptions initiated by other specialists were changed by family physicians in 11.6% of cases (95% CI: 6.0-19.6%).

Conclusion: Angiotensin-converting enzyme inhibitors were the most frequently prescribed antihypertensive class. Most diagnoses were made by the patient's own family physician. Prescriptions initiated by other specialists were usually continued by family physicians. Prescribing patterns were similar between family physicians and other specialists, except for lower use of beta-blockers and loop diuretics.

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PALAVRAS-CHAVE

Hipertensão arterial;
Anti-hipertensores;
Utilização de
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Cuidados de saúde
primários;
Vigilância sentinela

Escolhas terapêuticas iniciais para a hipertensão arterial na Rede de Médicos Sentinela**Resumo**

Introdução e objetivos: Conhecer os fármacos escolhidos para tratar os casos incidentes de hipertensão arterial ajuda a interpretar o uso prevalente de anti-hipertensores. Procurámos determinar a proporção de doentes que inicia tratamento com cada classe de anti-hipertensores, que médico inicia o tratamento, se os médicos de família alteram prescrições iniciadas por outros e comparar padrões de prescrição de médicos de família e outros especialistas.

Métodos: Estudo transversal aninhado na coorte da Rede de Médicos Sentinela entre 2014 e 2015. Foram notificados casos incidentes de hipertensão arterial descrevendo o tratamento, quem fez a prescrição inicial e se os tratamentos iniciados por outros médicos foram alterados.

Resultados: Notificados 681 casos incidentes. A prescrição inicial foi feita pelo médico de família em 86,9% (IC95% 84,2-89,3%) dos casos. Os agentes mais utilizados foram inibidores da enzima de conversão da angiotensina (51,3%, IC95% 47,5-55,0%), diuréticos tiazídicos (32,2%, IC95% 28,8-35,8%) e antagonistas dos recetores da angiotensina (21,4%, IC95% 18,5-24,7%). Comparados com outros especialistas, os médicos de família utilizaram menos beta-bloqueantes (20,4 versus 5,9%, $p < 0,001$) e diuréticos de ansa (8,2 versus 0,8%, $p = 0,003$). As prescrições iniciadas por outros foram alteradas em 11,6% dos casos (IC95% 6,0-19,6%).

Conclusões: Os inibidores da enzima de conversão da angiotensina foram a classe mais prescrita. A maioria dos diagnósticos foi feita pelo médico de família do doente. Os médicos de família habitualmente mantiveram as prescrições iniciadas por outros especialistas. Os padrões de prescrição de médicos de família e outros especialistas foram semelhantes, exceto o menor uso de beta-bloqueantes e diuréticos de ansa.

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Introduction

Following the trend in developed countries, the prevalence of hypertension in Portugal is rising steadily.¹ This has led to a near doubling in the use of antihypertensive drugs, in line with other OECD countries, and a corresponding increase in expenditure.^{2,3} A report by the Portuguese National Authority for Medicines and Health Products (INFARMED) found growing costs were mainly attributable to greater use of angiotensin receptor blockers (ARBs), despite increased use of generic medicines.² Compared with other European countries, use of ARBs was higher in Portugal, with almost as many prescriptions for ARBs in 2011 as for angiotensin-converting enzyme (ACE) inhibitors. The same report found that primary care physicians were the prescribing source for 76% of cardiovascular medicines dispensed in outpatient pharmacies in Portugal, used more ARBs than hospitals (although less than physicians in private practice), and prescribed as many generics as hospitals and more than private practice physicians. In addition to their higher cost, ARBs are backed by weaker evidence than ACE inhibitors for reducing morbidity and mortality, although they are less likely to be discontinued due to adverse effects.^{4,5}

Portuguese guidelines recommend thiazide or thiazide-like diuretics, ACE inhibitors, low-cost ARBs, long-acting calcium channel blockers (CCBs), or low-dose low-cost fixed-dose associations of diuretics with ACE inhibitors or ARBs as first-line therapy for patients at low to medium

cardiovascular risk.⁶ For patients at high cardiovascular risk, low-cost fixed-dose associations of thiazide diuretics or CCBs with ACE inhibitors or ARBs are recommended. Beta-blockers are also considered appropriate as initial therapy for younger patients and those with coronary heart disease and certain arrhythmias. The European Society of Hypertension and European Society of Cardiology guidelines state that the main benefits of treating hypertension are due to lowering blood pressure, independently of which medicines are used.⁷ Therefore, thiazide and thiazide-like diuretics, beta-blockers, CCBs, ACE inhibitors and ARBs are all considered appropriate as first-line agents. The European guidelines recommend lifestyle changes alone for young individuals with isolated elevation of systolic blood pressure and as initial treatment for patients with grade I hypertension at low to moderate cardiovascular risk.

Most studies on antihypertensive medication prescribing focus on prevalent use.^{2,8-10} However, this does not enable conclusions to be drawn about how physicians choose to use each medicine: as a first-line agent, as an alternative when initial therapy results in side effects, or as an add-on treatment when the patient fails to achieve blood pressure goals.¹¹ Focusing on incident use can determine which drugs are chosen as first-line treatment.

The prescription of ARBs and thiazide diuretics has been used as a quality indicator for primary care in Portugal since 2013.¹² The implicit aim was to decrease ARB use. Although family physicians issue most prescriptions,² it is not known

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