Educational Interventions May Promote Better Blood Pressure Control in Russia

Giuliano Tocci^{1,2} · Ilaria Figliuzzi¹

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Control of hypertension still remains an unresolved clinical problem. Despite marked improvement in both diagnostic opportunities and availability of integrated and well-tolerated antihypertensive drug therapies, several reports have independently and consistently showed a relatively high prevalence of the disease (ranging between 25 and 35%) and persistently low rates of blood pressure control (about 35–45%) [1–3]. This, of course, may have potentially harmful consequences for the sustainability of Health Care Systems, since hypertension is the most common cardiovascular risk factor in the general population, and it is responsible for the vast majority of cardiovascular morbidity and mortality, worldwide [4].

Indeed, hypertension-related clinical conditions, including coronary artery disease, stroke, renal failure, congestive heart failure and other metabolic abnormalities (mostly diabetes), heavily affect quality of life and markedly impact on costs related to complex pharmacological therapies and hospitalizations. In addition, the progressively increasing incidence of other cardiovascular and metabolic risk factors, such as smoking, obesity, dyslipidaemia, and metabolic syndrome, and the wide-spread adoption of unhealthy habits (e.g. sedentary life, unbalanced diet, physical and mental stress) further promote the risk of developing sustained blood pressure rise and accelerate the progression of hypertension-related

atherosclerotic diseases. On the basis of these considerations, closer attention might be devoted by physicians and health care providers for implementing strategies aimed at preventing the development and improving awareness of hypertension, respectively.

Evidence demonstrated that the first step for reducing the burden of a given disease, namely hypertension, in a setting of clinical practice should be an appraisal on prevalence, awareness, treatment and control rates of this clinical condition. With these purposes, numerous observational studies and epidemiological registries have been progressively made available during the last decades in various countries, worldwide. Information obtained from these analyses are of potential clinical relevance, since they can be effectively implemented by recommendations derived from international guidelines, in order to improve the clinical management and achieve the recommended blood pressure targets. In particular, recent studies have demonstrated that the implementation of rational and effective therapeutic regimes, mostly based on combination therapies, may promote higher rates of blood pressure control also in the setting of real practice [5–7].

In this issue of *High Blood Pressure and Cardiovascular Prevention*, Kiselev and co-authors reported a detailed and comprehensive analysis of clinical factors that may have potential impact on the achievement of the blood pressure goals in a large sample of adult individuals with hypertension in the Ivanovo, Russia [8]. This study is part of the larger Russian Registry of Hypertension, Coronary Artery Disease and Chronic Heart Failure, which is a retrospective, continuous, nation-wide, web-based registry. The present analysis involved about 1,037,000 individuals, predominantly female (about 55%), representing about 2.7% of the whole Russian population and about 4.2% of

✉ Giuliano Tocci
giuliano.tocci@uniroma1.it

¹ Hypertension Unit, Division of Cardiology, Department of Clinical and Molecular Medicine, Faculty of Medicine and Psychology, Sant'Andrea Hospital, University of Rome Sapienza, Via di Grottarossa 1035-39, 00189 Rome, Italy

² IRCCS Neuromed, Pozzilli, IS, Italy

the Russian Registry of Hypertension, Coronary Artery Disease and Chronic Heart Failure in January 2015.

In this population sample, only 6% of the enrolled individuals did not receive antihypertensive drug therapies, whereas more than 65% received combination therapies with at least two blood pressure lowering drugs. Of note, 45.9% of the patients from the Ivanovo region achieved the recommended blood pressure targets of less than 140/90 mmHg. These findings were consistent with those from a recent observational study, which collected data from the general practice in Italy in 2012–2013, which reported that about 60% of patients achieved the recommended blood pressure target [9], as well as in other recent report from European countries [10–12]. It should be also noted that among various factors potentially involved for the achievement of BP control in this population, medical education (mostly including advices on alcohol consumption, smoking cessation and weight reduction) represents the most relevant one, whereas presence of antihypertensive drug therapies seems to have relatively limited impact on the achievement of blood pressure goals.

These findings have potential clinical implications, since: (1) it is demonstrated that educational activities and life-style changes are cost-effectiveness interventions that can be easily applied to general population, independently by age, gender, ethnicity, and concomitant presence of cardiovascular risk factors and comorbidities; (2) it has been observed that antihypertensive therapies, even when used in rational therapeutic regimens, may have limited clinical effectiveness in the absence of healthy life style; (3) the implementation of favourable life style changes and effective and well-tolerated drug therapies may promote the achievement of much higher level of blood pressure control rates in the general population, thus leading to a reduced burden of hypertension-related cardiovascular and cerebrovascular diseases.

Although this registry, as well as many other ones, does not allow to estimate adherence to prescribed medications, these data can be used for adopting general and/or local interventions, aimed at improving blood pressure control and reducing the clinical impact of uncontrolled hypertension in this region. In particular, the main findings of the analysis highlighted the central role of educational interventions for promoting favourable life-style changes and adopting non-pharmacological actions to reduce blood pressure levels and achieve the recommended blood pressure goals.

Compliance with Ethical Standards

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Conflict of interest Authors have no conflict of interest to disclose.

Ethical approval This article does not contain data derived by any current studies with human participants performed by any of the authors. The clinical studies mentioned were provided with specific ethical approval.

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