

## The Challenges of Controlling Arterial Hypertension in the Elderly

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Short Editorial related to the article: Hypertension Prevalence, Treatment and Control in Older Adults in a Brazilian Capital City

This issue of the “Archives” brings the study “Hypertension Prevalence, Treatment and Control in Older Adults in a Brazilian Capital City”, by Souza ALL et al.,<sup>1</sup> disclosing data about this important cardiovascular risk factor in Goiânia, state of Goiás, Brazil, depicting the situation in our country.<sup>1</sup> In this mini-editorial, we review the epidemiology of arterial hypertension (AH) in Brazil and worldwide.

AH is the leading preventable cause of premature death.<sup>2</sup> A report by the US Institute of Medicine considers AH as a neglected disease, because it is often overlooked by the population and underestimated by the medical community.<sup>3</sup> Although AH is relatively easy to prevent, simple to diagnose and considerably less expensive to treat, it remains one of the most important causes of death.<sup>4</sup> More than 50% of deaths from coronary artery disease and cerebrovascular accidents in the US occur in individuals with AH.<sup>5</sup>

A survey concluded that the estimated global prevalence of AH is increasing.<sup>6</sup> Globally, 31.1% of the adult population had AH in 2010. The prevalence of AH is higher in low- and middle-income countries (31.5%) when compared to high-income countries (28.5%).<sup>6</sup> From 2000 to 2010, the AH prevalence in high-income countries decreased by 2.6%, and awareness, treatment and control substantially improved. However, in low- and middle-income countries, there was an increase in prevalence of 7.7%.<sup>6</sup>

However, a more recent analysis showed that the overall prevalence of age-standardized AH was 24.1% in men and 20.1% in women by 2015.<sup>7</sup> The worldwide number of adults with AH increased from 594 million in 1975 to 1.13 billion in 2015, increasing mainly in low- and middle-income countries.<sup>7</sup>

In relation to the elderly population, the International Mobility In Aging Study (IMIAS) showed that the prevalence of AH ranged from 53.4% to 83.5% in five assessed cities: Kingston (Canada), Saint-Hyacinthe (Canada), Tirana (Albania), Manizales (Colombia) and Natal (Brazil).<sup>8</sup> More than 2/3 of the hypertensive participants were aware of the diagnosis (of 67.3% in Saint-Hyacinthe to 85.4% in Tirana), especially among women.<sup>8</sup> Although more than 80% of the patients were receiving treatment, the control rates were low: 37.6%

in Manizales; 29.5% in Kingston; 26.5% in Saint-Hyacinthe; 24% in Tirana and 22% in Natal, with the Brazilian city showing the least effective disease control.<sup>8</sup>

Currently, Canada has the world's best rates of AH control, estimated at 68% of the affected population.<sup>9</sup> That country has achieved a dramatic reduction regarding the lack of diagnosis knowledge (43% in 1991 versus 17% in 2013), with the percentage of patients being treated increasing from 34% to 80% in the same period.<sup>9</sup>

The US has shown better AH control in women than in men (55.3% versus 38.0% in 2009-2012); as well as among Whites compared to Blacks and Hispanics (41.3% versus 31.1% and 23.6%).<sup>10</sup> In that country, there is a better AH control among the elderly than in young individuals (50.5%, in adults aged 60 to 70 years, versus 34.4% in patients aged 18 to 39 years in 2011-2012).<sup>11,12</sup> As for the population aged 75 years or older, there was a slight decline in control (46%), which continues to decline from 80 years onward (39.8%).<sup>12</sup>

In Brazil, data from the “Surveillance System for Risk and Protective Factors for Chronic Diseases by Telephone Survey (Vigitel)” (2006 to 2014), indicate that self-reported AH in adults living in capitals ranged from 23% to 25%.<sup>13,14</sup> Among adults aged 60 to 64 years, the prevalence was 44.4%; in those aged 65 to 74 years, 52.7%; and from 75 years onward, 55%.<sup>13</sup> The rates of knowledge (22% to 77%), treatment (11.4% to 77.5%) and control (10.1% to 35.5%) varied widely, depending on the assessed population.<sup>15</sup> Data from VIGITEL 2017, related to 2016, showed that 60.9% of adults aged 65 years and older reported the diagnosis of AH in a telephone survey.<sup>16</sup>

The first Brazilian Registry of AH reveals encouraging data, demonstrating a significant improvement in AH control in the country, when considering the population treated in referral centers.<sup>17</sup> Based on the population treated in 45 centers distributed throughout all Brazilian regions, with a mean age of 61 years, blood pressure (BP) control was observed below 140/90 mmHg in 59.6% of the patients, considering the stabilization of BP in all visits, and 60.6% when considering the measurements in the one-year follow-up consultation.<sup>17</sup> Such rates, however, do not reflect the overall situation of AH control in the country.

In the article by Souza ALL et al.,<sup>1</sup> published in this issue, the total prevalence of AH in the assessed elderly was 74.9%, being higher among men (78.6%). The treatment rate was 72.6% and the percentage of AH control was 50.8%, being higher among women.<sup>1</sup> These data show that, although there is still need for improvement, there has been an important increase in the rates of diagnosis, knowledge, treatment and control of AH in our country, especially among the elderly population.

### Keywords

Hypertension/epidemiology; Aged; Hypertension/prevention and control; Prevalence; Arterial Pressure.

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