

# Beliefs about medicines and medication adherence in patients with hypertension

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**Background** The most important reason for poor blood pressure control in patients with hypertension is inadequate medication adherence. Medication nonadherence may be unintentional due to forgetfulness, or intentional when it occurs due to the patient's conscious decision, which is often related to beliefs about medicines.

**Purpose** The aim of the study was to evaluate the hypertensive patients' medication beliefs and their impact on medication adherence and blood pressure control.

**Method** We conducted a cohort study in 11 community pharmacies in Slovenia. We enrolled patients with hypertension, who were prescribed Angiotensin-converting enzyme inhibitor (ACEI) or Angiotensin II Receptor Blocker (ARB) for at least 3 months. To evaluate medication beliefs patients self-completed Beliefs about Medicines Questionnaire. At follow-up visit 8 weeks later, we performed pill count for all antihypertensive medicines to evaluate medication adherence. Blood pressure was measured at both visits using automatic blood pressure monitor Omron M6 based on a predefined protocol.

**Findings** In total, we enrolled 117 patients with average age of 66 years, 65% were female. 30.2% of patients didn't recognize the need to take antihypertensive medicines and in 12.9% of patients concerns about taking them outweighed the perception of benefits. 3.4% of patients were skeptical, 11.2% ambivalent, 26.7% indifferent and 58.6% were accepting regarding their antihypertensive therapy. The proportions of doses taken were 79.1%, 95.6% and 97.8% in ambivalent, accepting and indifferent group, respectively. The linear regression model ( $R^2=0.102$ ;  $p=0.009$ ) showed that medication adherence was 16.5% higher in accepting patients ( $p=0.005$ ) and 18.7% higher in indifferent patients ( $p=0.003$ ) compared to ambivalent patients. Mean systolic and diastolic blood pressure were 149.1 and 95.3 mmHg in the skeptical group, 147.6 and 87.1 mmHg in the ambivalent group, 143.4 and 87.6 mmHg in the indifferent group, and 138.9 and 84.9 mmHg in the group of accepting patients. Blood pressure was therefore the highest in the skeptical group and the lowest in the accepting group; however, patients' attitudes did not show a significant effect on blood pressure control.

**Conclusion** Approximately a third of patients didn't recognize the need to take antihypertensive therapy. Medication beliefs were found to have an impact on medication adherence, since patients who are concerned about taking antihypertensive medications are less likely to take them regularly. The results also suggest the impact of medication beliefs on blood pressure control in patients with hypertension.