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Objective: One of the reasons for patients’ poor medication compliance is the occurrence of drug-induced adverse events. The aim of this study was to determine the prevalence of Multiple Drug Intolerance Syndrome (MDIS), defined as adverse events after 3 or more drug classes, in a group of patients with arterial hypertension and to assess the predisposing factors.

Design and method: The study population comprised hospitalized patients diagnosed with arterial hypertension as well as patients undergoing chronic treatment in an outpatient hypertension clinic. A structured proprietary questionnaire was used, which focused on demographic and clinical data, including current or past incidences of adverse drug reactions.

Results: The study population comprised a total of 1000 patients, including 560 women. The mean age was 62.84 ± 14.96 years. Eighty percent (80%) suffered from MDIS. A significantly higher percentage of patients with MDIS were women (71.1% vs. 5.5%, p = 0.006) and patients with longer-lasting hypertension (median 15 vs. 10 years, p = 0.008). Moreover, among patients with MDIS, the following disorders were more frequent: respiratory (21% vs. 11%, p = 0.013), gastrointestinal (25% vs. 13%, p = 0.003), rheumatic (24% vs. 9%, p = 0.001) and endocrine (29% vs. 16%, p = 0.007). The risk of MDIS was highest in the case of concomitant use of analgesics, OR = 65.59, p < 0.001, followed by beta-blockers, OR = 48.42, p < 0.001, antiplatelet drugs, OR = 47.26, p < 0.001 and antibiotics OR = 30.04, p < 0.001.

Conclusions: MDIS in patients with hypertension is common and affects more frequently women and patients with a longer disease duration. Comorbidities increase risk of MDIS. The risk of MDIS is most strongly associated with the use of analgesics, beta-blockers, antiplatelet drugs and antibiotics.

ATHERO: AN OBSERVATIONAL CROSS-SECTIONAL EVALUATION OF Atherosclerotic Risk Control in the Belgian POPULATION TREATED WITH AT LEAST ONE ANTIHYPERTENSIVE AND ONE LIPID-LOWERING DRUG

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Objective: To evaluate real-life lipid and blood pressure (BP) control in a contemporary Belgian population sample treated with at least one lipid-lowering and one antihypertensive drug.

Design and method: Data was collected through GP questionnaires on 2337 subjects (ATHERO STUDY).

Results: A complete set of relevant clinical variables was available for 1706 subjects, men: age 67.9 ± 10.9 years; mean BMI 28.4 ± 4.9 kg/m2, in which CVD, CAD, DM and renal insufficiency were reported respectively in 34.0%, 22.2%, 37.5% and 6.6% of cases. Based on the 2016 EAS/ESE guidelines for the management of dyslipidemias, 68.8% of subjects were classified as very high risk (VHR) and 10.9% as high-risk (HR). Despite the majority (almost 70%) taking ≥1 antihypertensive drug, BP was uncontrolled in 44.0% (using the 140/90 mmHg threshold), without clear differences in control across risk strata. Treatment targets from the 2016 LDL-cholesterol guidelines were met in only 24.4% of VHR and 45.7% of HR subjects. For the new LDL-cholesterol targets 2019 ESC/EAS guidelines for the management of dyslipidemias (which came after the data collection) this would be 10.1% and 11.7% respectively. GP’s estimated adequate BP control in 69.2% and LDL-cholesterol control in 63.4% of cases. Combined BP and LDL-cholesterol control was achieved in 16.1% of VHR and 26.9% of HR subjects. In the VHR group there was a clear gender disparity (11.7% of women compared to 18.6% of men) in achieving adequate combined control. More striking, combined control in those VHR subjects with a clinical condition (1040/1174 subjects) was 17.9% whilst in those with VHR due to risk factor combinations this was only 2.2%. Use of combination lipid-lowering and antihypertensive drug combinations was low (1.8%) whilst 66.5% of subjects were potential candidates.

Conclusions: In GP practices, target achievement was very low for BP and even more so for LDL-cholesterol prevention targets amongst VHR patients, especially in those associated to risk factor combinations rather than more easily recognizable clinical conditions. There was a clear disparity between GPs’ estimates of risk factor control/target achievement and real-life figures in GP practices.

ASSSESSMENT OF ADHERENCE TO ANTIHYPERTENSIVE MEDICATION IN A POPULATION OF ARGENTINA DURING THE COVID-19 PANDEMIC

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Objective: The objective was to assess the adherence to antihypertensive treatment and its determinants in patients during the pandemic by COVID-19

Design and method: A multicenter, prospective, observational cohort study included outpatients from the Cuyo region of Argentina from March to July 2021 that met the following inclusion criteria: 1- patients over 16 years old under antihypertensive treatment; 2- informed consent signature 3- complete 35-dimensional questionnaire.

Results: From 512 enrolled patients, 468 met the inclusion criteria. The average age was 50.1 ± 0.1 years, 56.8% were women. At least 39% had 1 CV risk factor. COVID-19 was documented in 35% and 3.6% presented a severe form. The most widely used vaccine was Sputnik V and 70% had at least 1 dose of vaccination for COVID-19. Average adherence was 69%. The average of systolic blood pressure was 139.3 ± 1.0 mmHg and diastolic blood pressure was 85.9 ± 0.6 mmHg. The average number of antihypertensive drugs was 1.26. Table 1 shows the results of multivariate analysis.

Conclusions: In a population with intermediate cardiovascular risk, adherence was low, and blood pressure control was suboptimal. The most important predictive variables of low adherence were age, the number of antihypertensive drug tablets, level of education, and smoking.

RESISTANT HYPERTENSION IMPROVED AFTER 3 AND 6 MONTHS BY MEASURING DRUG LEVELS TO IDENTIFY NON-ADHERENCE

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**MEDICATION NON-ADHERENCE IN UNCONTROLLED HYPERTENSION: SELECTIVE DETECTION AND EFFICIENCY AND EFFECTIVENESS OF A PROGRAM TO IMPROVE COMPLIANCE (ATHAN TRIAL)**

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**Objective:** To assess whether the implementation of a specific action plan to improve adherence for 3 months results in reduced peripheral 24h-systolic blood pressure (SPB) in patients with resistant hypertension (RH) or uncontrolled hypertension with at least 2 drugs.

**Design and method:** Interventional, prospective, randomized, controlled, parallel groups, open study of patients consecutively attended in a specialized Hypertension Unit with ambulatory 24h-BP equal or more than 130 and/or 80mmHg although receiving at least 2 antihypertensive drugs. The partially or completely non-adherent patients (confirmed by determination of antihypertensive drugs in urine) were randomized (1: 1) to receive a specific program to improve adherence (intervention group) or routine follow-up (control group), with determination of antihypertensive drugs in urine, office-BP measurement and 24h-ambulatory BP monitoring at pre-randomization and 3 months.

**Results:** Forty-three patients were randomized (mean age 59±14yr, 70% male). Mean±SD baseline SBP/DBP(mmHg) were 150.4±17.1 and 90.7±15.5, and the number of prescribed non-detected drugs in urine was 2±1.4. At 3 months, the variation of SBP-24 h for the intervention group and the control group was (mean±95%CI) = -14.3 mmHg (-20.5 to -8.1), p < 0.001 and -3.3 mmHg (-10.2 to 3.7), p = 0.339, respectively. At 3 months, the variation of the number of non-detected antihypertensive drugs in urine was (mean±95%CI) = -1.29 mmHg (-2.06 to -0.53), p = 0.002 and -0.53 mmHg (-1.26 to 0.2), p = 0.144, respectively.

**Conclusions:** A specific nursing intervention to improve therapeutic adherence results in an improvement of BP control in patients with difficult-to-control hypertension and inadequate therapeutic compliance.

**BELIEFS IN HEALTH AND ADHERENCE TO TREATMENT IN HYPERTENSION PATIENTS IN BARRANQUILLA- COLOMBIA**

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**Objective:** To determine through the systematic review which are the factors that determine adherence to pharmacological treatment in hypertensive patients.

**Main factors that determine adherence to pharmacological treatment in hypertensive patients. Systematic review**

**Conclusion:** High blood pressure is a global public health problem associated with an increased risk of developing cardiovascular disease, which requires lifelong treatment. The main consequence of suffering from hypertension is the development of complications that deteriorate the patient’s quality of life and inevitably cause death. Therefore, adherence to pharmacological treatment is essential in the treatment of chronic diseases, particularly hypertension, the identification and understanding of the factors that modify adherence to treatment is key to adapt a better control of hypertensive patients. The findings of existing studies should be interpreted with caution due to their methodological limitations. The results of this study confirm that pharmacological adherence to the treatment of hypertension is due to a multiplicity of factors, such as: socioeconomic factors, related to access to health systems, therapy, related to the condition and the patient. Since some of these factors are mutable, they may be the focus of interventions to increase medication adherence.