

## 24-Hour BP Profiles in Patients with Kidney Disease-single center experience

Herenda V, Rebić D, Hasanspahić S, Hamzić-Mehmedbašić A, Mrkonja-Ribić A, Odobašić M.  
Nephrology clinic, Clinical Center University of Sarajevo, Bolnička 25, 71000 Sarajevo, Bosnia and Herzegovina

**BACKGROUND** Depending on results of ambulatory blood pressure monitoring (ABPM) patients have different hypertension profiles and some large international studies tried to examine and compare ABPM profile of patients in different countries. In our study we tried to establish hypertension profiles of our patients.

**MATERIALS AND METHODS** This is retrospective, cross-sectional study from October 2022 to April 2023. Demographic, clinical and 24-hour ambulatory blood-pressure data were examined. Patients were divided in several categories according to their hypertension phenotypes and dipping profiles. Analyses were conducted with Cox regression models, adjusted for clinic and 24-hour ambulatory blood pressures and for confounders.

| Hypertension phenotypes—no(%)       | All patients (N=94) | Patient alive at the end of study (N=82) | Patient who died (N=12) | p-value |
|-------------------------------------|---------------------|------------------------------------------|-------------------------|---------|
| Normotension                        | 3(3.19)             | 3(3.65)                                  | 0(0.00)                 | p>0.05  |
| Controlled hypertension             | 20(21.2)            | 17(20.7)                                 | 3(25.0)                 | p>0.05  |
| White-coat hypertension             | 29(30.8)            | 25(30.4)                                 | 4(33.0)                 | p>0.05  |
| Sustained uncontrolled hypertension | 25(29.7)            | 22(26.8)                                 | 3(25.0)                 | p>0.05  |

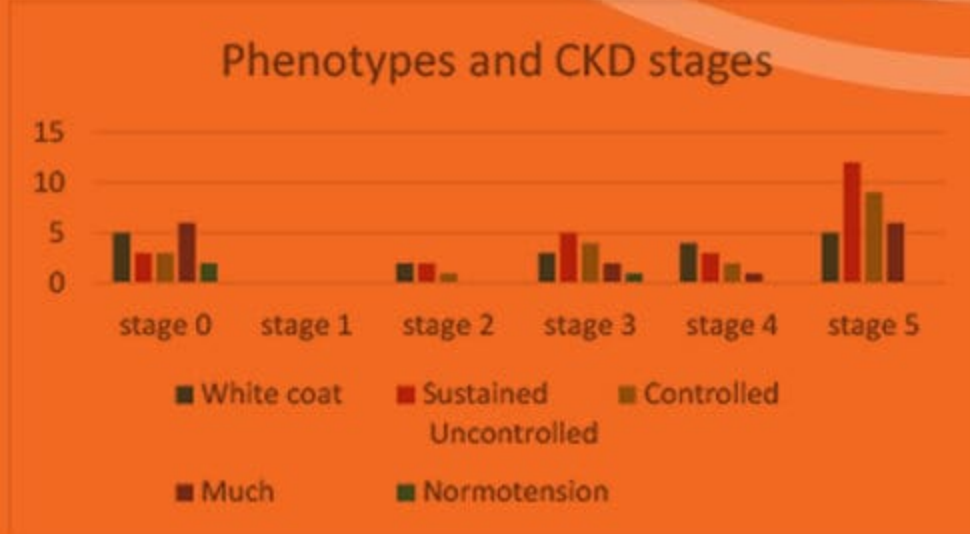
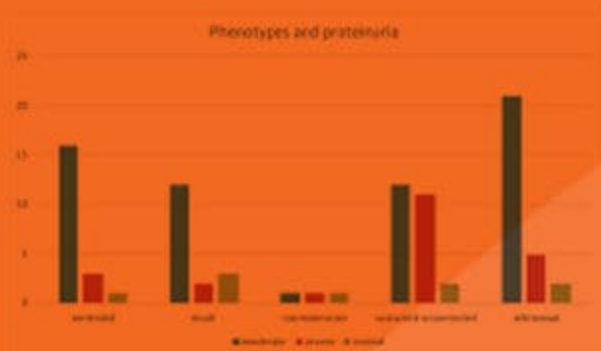


Table 1. Hypertension phenotypes

Figures 1. Hypertension phenotypes according to stage of CKD



Figures 2. Hypertension phenotypes according to sex



Figures 3. Hypertension phenotypes and proteinuria

**CONCLUSIONS** The prevalence of high-risk BP profile in renal patients is high. Due to elevated nocturnal BP clinic BP monitoring alone is inadequate. ABPM should become golden standard to confirm adequate BP control in patients with kidney disease.

| Dipping status           | Alive (N=82) | Died (N=12) | p-value |
|--------------------------|--------------|-------------|---------|
| Dipper systolic          | 14(14.8)     | 11(13.4)    | <0.001  |
| Extra dipper systolic    | 1(1.06)      | 1(1.21)     | <0.001  |
| Non-dipper systolic      | 41(43.6)     | 38(46.3)    | <0.001  |
| Reverse dipper systolic  | 38(40.4)     | 32(39.0)    | <0.001  |
| Dipper diastolic         | 13(13.8)     | 11(13.3)    | <0.001  |
| Extra dipper diastolic   | 1(1.06)      | 1(1.21)     | <0.001  |
| Non-dipper diastolic     | 39(41.4)     | 34(41.4)    | <0.001  |
| Reverse dipper diastolic | 40(42.5)     | 94(1.14)    | <0.001  |

Table 2. Dipping status

**RESULTS** 94 patients were included in study. During follow up 12 patients died. White-coat hypertension was the most common hypertension phenotype in our patients 30.8%, the second largest group was sustained uncontrolled hypertension (29.7%). Also, we have found high prevalence of non-dippers systolic (43.6%) and reverse dipper diastolic (42.5%). The results shows highly significant differences between group who was alive and group who died, with having p < 0.001, which indicates that the dipping status of blood pressure is associated with the survival outcomes.

