Therapy, Pharmacoeconomics and Pharmacovigilance

11.6 Determinants of Resistant Hypertension in a Sample of Adult Male

Population (8-Year Follow-Up)

A. Barbato (1), F. Galletti (1), L. D'Elia (1), R. Ippolito (1), P. Schiattarella (1), S. Avallone (1), R. Iacone (1), A. Venezia (1), M. Versiero (1), O. Russo (1), D. De Palma (1), P. Strazzullo (1)

(1)Università di Napoli "Federico II", Napoli, Italy

Introduction. The determinants of resistant hypertension (RI), defined as a blood pressure persistently above goal in spite of the concurrent use of 3 antihypertensive agents of different classes, remain largely unknown.

Aim. To study the predictors of RI in 799 participants at the Olivetti Heart Study (OHS), mean age 51.5 years (SD±7.2) after an average follow-up period of 8 years.

Methods. All participants attending basal (1994-95) and final (2002-04) examination of the Olivetti Heart Study have been considered in the present study. A complete database including anthropometric, biochemical and ECG data was available for the analysis.

Results. Among the 799 participants not affected by RI at basal examination, 497 (62.2%) were normotensive and 302 (37.8%) hypertensive. After 8 years, overall 29 subjects (3.6%) developed RI. Age, BMI, waist circumference, blood pressure, Cornell Index, serum total cholesterol and uric acid, urinary fractional sodium excretion (FENa), a marker of the dietary sodium intake, and albuminuria (ALB) were significantly higher ($p<0.05$) in participants who developed RI compared with the others. Using a logistic regression model, after adjustment for basal antihypertensive treatment, the independent predictors of RI were microalbuminuria (Odds Ratio, 3.2; C.I 95%: 1.1-9.3), proteinuria (12.2; 1.9-76.5), systolic BP (2.1; 1.4-3.3) and FENA (1.4; 1.1-1.7) remained the only independent predictors of RI.

Conclusions. Our data indicate that an early marker of organ damage (albuminuria), and elevated dietary sodium intake and a higher basal blood pressure level were independent predictors of the development of RI in this adult male population.