Highlights of the July issue

Guido Grassia and Giuseppe Manciab

The articles published in the current issue of the Journal of Hypertension cover diversified aspects of the diagnostic approach to hypertension, from blood pressure measurement to blood pressure variability, its pathophysiology and therapeutic approach.

As far as blood pressure measurements are concerned the Journal of Hypertension is delighted to present to its readership the 2021 European Society of Hypertension Practice Guidelines for office and out-of-office blood pressure measurement prepared by Stergiou et al. (pp. 1293–1302), on behalf of the European Society of Hypertension Working Group on Blood Pressure Monitoring and Blood Pressure Variability in conjunction with the Council of the European Society of Hypertension. The document, which summarizes essential recommendations for blood pressure measurement in- and out-of-office, is aimed at helping physicians in making the correct use of the several information derived from ambulatory blood pressure monitoring and home blood pressure measurement.

Three articles are focused on different aspects of blood pressure variability. In particular, Seidel et al. (pp. 1269–1273) examine the effects of aerobic and isometric exercise on this parameter, documenting a potential lowering effect produced by regular aerobic exercise on variability. Fan et al. (pp. 1346–1351) provide data on the relationships between blood pressure variability at a first medical visit and the subsequent visits, whereas Ikeda et al. (pp. 1435–1445) attempted to better define which are the hypertensive patients who benefit more from statin treatment. Results of this interesting study identify in patients displaying a greater blood pressure visit-to-visit blood pressure variability those who may have greater cardiovascular benefits from treatment. Given the evidence, obtained in previous studies, that statin may have sympathoinhibitory properties, it is likely that, among the factors potentially responsible for the finding, a likely one is represented by the sympathomodulatory effects of the drug, which appear to be greater when greater levels of sympathovagal imbalance occur, and thus higher degrees of blood pressure variability are detected.

Several articles are focused on pathophysiological aspects of hypertension, from salt intake to vascular and endothelial abnormalities. One original article by Chinese investigators (Qian et al., pp. 1326–1332) provides interesting information on the easiest method to reliably assess 24-h urinary sodium excretion in large population samples, documenting the potential advantages, coupled with greater reliability, of the early morning urine spot formulae used in the INTERSALT Study. The accompanying Editorial Commentary by Bagrov (pp. 1309–1310) provides an intriguing brief overview on how high salt intake may adversely affect cardiovascular risk profile and in particular kidney function. As above mentioned, other articles deal with pathophysiological aspects of the hypertensive state. Indeed, Nolde et al. (pp. 1352–1360) with the accompanying Editorial Commentary by Zhou and van Twist (pp. 1311–1313) and Königstein et al. (pp. 1361–1369) shed light on the interrelationships between arterial stiffness, endothelial dysfunction, elevated orthostatic blood pressure and cardiovascular risk. The main message from these studies is the potential advantage of examining endothelial function for cardiovascular risk determination and arterial stiffness as a potential marker for future development of orthostatic hypertension, respectively.

Autonomic function and its dysregulation occurring in individuals suffering from syncope and in patients with chronic renal failure are examined by two articles. The first by Brignole et al. (pp. 1319–1325) investigates the hemodynamic and the autonomic profile of patients with anamnestic evidence of reflex syncope, analyzing a database of >65 000 patients. Results show the association of reflex syncope with a history of low systolic blood pressure at rest together with an elevation in resting heart rate values. Since heart rate is a marker of sympathovagal balance, an elevation in heart rate may represent the mirror of an elevated sympathetic/cardiac drive with a concomitant reduction in the vagal influences to the sinus node. This autonomic dysfunction can be seen in the very early phases of the disease predisposing to the development and progression of the syncopal episodes. Heart rate evaluation as a marker of sympathetic/parasympathetic cardiac drive is also the topic of the study by Dell’Oro et al. (pp. 1429–1434). The authors investigated whether and to what extent heart rate can be regarded as a valuable marker of the sympathetic activation characterizing chronic kidney disease. Sympathetic nerve traffic in the peroneal nerve has been taken as a gold-standard measurement of the adrenergic overdrive characterizing mild and severe renal failure and it was related in the present study to other sympathetic markers, such as venous plasma norepinephrine and heart rate...
values. Results show that while both sympathetic nerve traffic and plasma norepinephrine mirror the clinical severity of the renal failure state, heart rate was unable to reflect in a sensitive fashion the progressive decline in renal function. This finding therefore poses some doubts on the reliability of this hemodynamic variable to reflect the various degrees of sympathetic activation detected in renal failure patients of different clinical severity, at variance from what has been reported in other cardiovascular and cardiometabolic diseases.

The present issue of the Journal also includes articles dealing with different aspects related to target organ damage, such as alterations in aortic strain (Cesareo et al., pp. 1402–1411), cardiac septal hypertrophy (Marciniak et al., pp. 1421–1428) and relationships between vascular organ damage and cortisol (Haddad et al., pp. 1412–1420). Articles by Cesareo et al. and by Marciniak et al. are both accompanied by an Editorial Commentary by Mancusi (pp. 1314–1315) and by Saeed and Edvardsen (pp. 1316–1318), respectively. The July issue also includes one review article by Saeed et al. (pp. 1282–1292) on COVID and cardiovascular complications. The article, which is accompanied by an Editorial Commentary by Redon (pp. 1306–1308), provides an up-to-date review on the possible sequelae of COVID infections on the heart and, more in general, on the cardiovascular system, highlighting the potential neurohumoral mechanisms (particularly renin-angiotensin-aldosterone activation and concomitantly sympathetic overdrive) which may participate at the cardiovascular organ damage development and progression.

Finally, in the issue, the Journal published a number of studies dealing with therapeutic aspects of the uncomplicated and complicated hypertensive state. Among them, the article by Kichenadasse et al. (pp. 1274–1281) and the accompanying Editorial Commentary by Grassi and Tadic (pp. 1303–1305) deal with the potential adverse cardiovascular effects of anticancer therapy based on immune checkpoint inhibitors. Results of the large SEER-Medicare Study provide documented evidence on the reduced cardiovascular toxicity of this new therapeutic approach as compared to the classic chemotherapeutic one. The study by Kichenadasse et al. adds to this information the finding that angiotensin-converting enzyme inhibitors and angiotensin II receptor antagonists can be safely employed in the treatment of hypertension in cancer patients.

ACKNOWLEDGEMENTS

Conflicts of interest
There are no conflicts of interest.