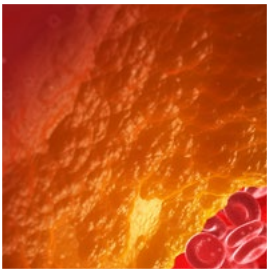
The 2021 Digital Learning Journey on Hypertension

CONGRESS REPORT

European Society of Hypertension/ International Society of Hypertension Joint Meeting 2021

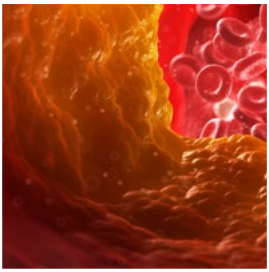


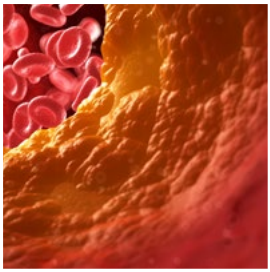
ESH-ISH 2021

11-14 April 2021

The Digital Experience

A record-breaking event





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BIOGRAPHY

Guido Grassi

Guido Grassi is Full Professor of Internal Medicine at the Clinica Medica of the University of Milano-Bicocca, Director of the Clinica Medica Institute at Saint Gerardo Hospital-Monza/Milano, Italy, Director of the Post-graduate School of Internal Medicine and of the PhD course in Public Health at the University of Milan-Bicocca. He has been Vice-chairman (2002–2004) and then Chairman (2004–2006) of the working group looking at hypertension and the heart for the European Society of Cardiology (ESC). He has been Treasurer and then Secretary of the Italian Society of Hypertension (2004–2007). In 2006–2007 he was a member of the Task Force of the European Society of Hypertension (ESH)/ESC for the 2007 Guidelines on Hypertension. In 2007, he was appointed Wright Lecturer at the annual meeting of the High Blood Pressure Council of Australia. Professor Grassi has served as a member of the Scientific Council of the International Society of Hypertension from 2008–2012 and 2012–2016, and as a member of the Scientific Council of the ESH from 2013–2016. In 2009, he received the Bjorn Folkow Award and Lecture from the ESH.

His research areas include the pathophysiology, clinical pharmacology and treatment of hypertension, obesity and metabolic syndrome, cardiac arrhythmias and heart failure. He has published more than 600 original papers and reviews in major scientific international journals (H index: 86). He has served as Vice President of the Italian Society of Hypertension from 2017–2019 and is incoming President for 2019–2021. In 2018, he was appointed Expert Reviewer of the 2018 ESC/ESH Guidelines document on hypertension by the ESC/ESH, as well as receiving the Paul Korner Award from the International Society of Hypertension.

CONGRESS REPORT

Originally planned to be held in Glasgow, UK in 2020, the European Society of Hypertension/International Society of Hypertension (ESH/ISH) Joint Meeting was rescheduled for 2021 with the hope that the COVID-19 pandemic was a temporary, short-lived event - over by the end of 2020. As we all know, this has not been the case, but the two societies decided not to postpone this scientific event further, instead, planning a digital edition of the meeting. More than 5000 clinicians and investigators from Australia, Europe, China, Asia, North and South America attended the 'virtual' meeting, thus confirming genuine interest for hypertension research around the world.

The meeting program included state-of-the-art lectures, live sessions organized by the different Working Groups of the ESH, oral communications, e-posters and debates on controversial clinical aspects of hypertensive disease. As discussed later in this meeting report, the meeting program included the presentation of two important documents, the ISH 2020 Global Hypertension Practice Guidelines and the 2021 ESH Practice Guidelines for Office and Out-of-office Blood Pressure Measurement.

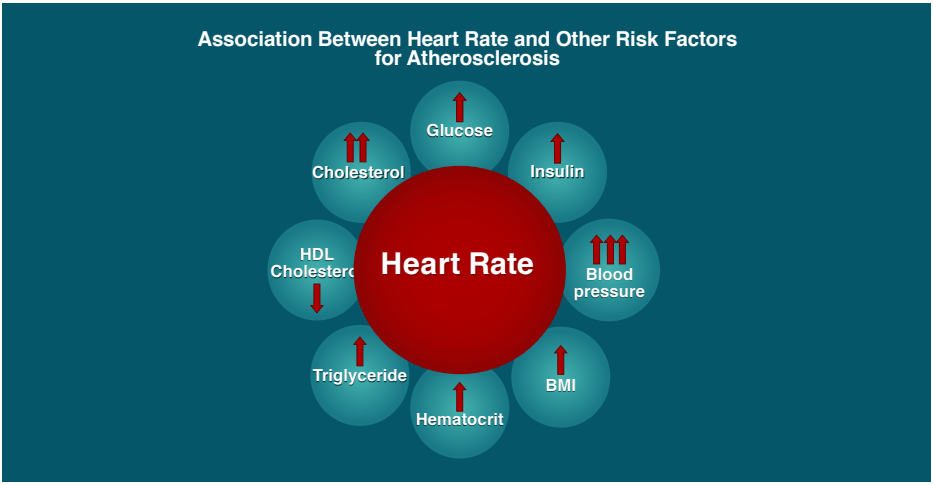
The opening ceremony included the very well supported lecture by Dr Victor Dzau, President of the National Academy of Medicine, USA, who focused his talk on the future of hypertension. The lecture started with the evidence that despite the huge health burden and sustained research efforts focused on hypertension, the progress and improvement in hypertension control remains slow. Dr Dzau explained that transformation is need to reduce the burden of the disease, and the major areas he suggested for renewal included: digital transformation, data science and artificial intelligence transformation, biotechnology and biomedical transformation and healthcare delivery and population science transformation. In particular, he drew attention to the need for the development of safer and more effective drugs for hypertension management and control, and for genome editing to target genes for human hypertension aimed at treating the complications of uncontrolled hypertension, such as thrombotic and hemorrhagic stroke, retinopathy, acute myocardial infarction, heart failure, proteinuria, renal failure and atherosclerotic vascular disease. The hope for the future is that these measures should be effective strategies for population health, implementing productive developments and providing better access to diagnosis and efficient treatment combined with improvements in treatment quality.

Dr Ernesto Schiffrin (Montreal, Canada) reviewed the potential contribution of immune factors to the development and progression of endothelial dysfunction and vascular remodeling in hypertension. Main sessions in the program included those focused on renal denervation, heart failure with preserved ejection fraction, cognitive dysfunction and blood pressure variability. For renal denervation, presentations by Dr Melvin Lobo (London, England), Ronald Schmieder

(Erlangen, Germany) and Dr Michel Azizi (Paris, France) provided solid evidence about rationale, current results and perspectives of the interventional approach based on ultrasound. Renal denervation by ultrasound allows the delivery of circumferential energy to efficiently target and ablate renal sympathetic nerves, while simultaneously protecting the endothelium and requiring much less use of contrast medium during the procedure and minimal staff training. During one symposium, the main results of the Radiance HTN-Solo trial, performed in hypertensive patients uncontrolled by drugs, was presented. Results from this trial provide evidence that the ultrasound approach is effective in reducing office and ambulatory blood pressure values (particularly systolic) without side-effects. The main objectives and design of another trial, the Radiance-HTN TRIO, for patients with resistant hypertension, were also presented.

Other meeting sessions were focused on the close link, documented in different studies (Rotterdam Study, Tree-city Study, Health ABC Study and Swedish-SNAC-K Study), between greater systolic blood pressure variability with postural changes and long-term risk of developing cognitive decline and dementia. During the meeting, Dr Pedro Cunha (Guimaraes, Portugal) presented the ESH working group "Hypertension and the Brain" document, prepared in collaboration with the European Geriatric Medicine Society, on the importance of cognitive screening in older hypertensive patients in order to improve and delay the onset, progression and disabling outcomes of dementia. Emphasis was given to the evidence that brain damage can be the only hypertension-mediated organ damage in more than 30% of hypertensive patients, with damage evolving undetected for several years if not appropriately screened for and the risk is not adequately stratified.

In two sessions of the meeting, the relevance of elevated heart rate as an independent cardiovascular risk factor and as a marker of future development of hypertension was discussed.



There is evidence that in hypertensive patients (particularly if young), resting clinic heart rate values greater than 80 beats per minute should be taken as a marker of sympathetic activation and thus potentially as a target of non-pharmacological or pharmacological interventions. New guidelines on hypertension issued by the European Society of Cardiology and the ESH have included elevated heart rate in the list of cardiovascular risk factors.

Other interesting sessions in the program were those related to the presentation of the preliminary results of the IBERICAN Study (Dr Jose Polo Garcia, Madrid, Spain), the position of sodium glucose co-transporter 2 inhibitors in the therapeutic armamentarium for treatment of cardiovascular disease with special focus on hypertension (Dr John Murray, Glasgow, UK) and the importance of endogenous microbiota in blood pressure regulation and as a potential mechanism for blood pressure control (Dr Joe Bina, Toledo, USA). In particular, the findings from the IBERICAN Study, whose primary aim was the determination and control of cardiovascular risk factors, have shown that in more than 8000 subjects representative of the general Spanish population, the major cardiovascular risk factors are dyslipidemia (50% of the whole population sample), followed by hypertension (48%), obesity and being overweight (35%), cigarette smoking (18%) and diabetes mellitus (20%). Other interesting findings from the IBERICAN database were that, in Spain, blood pressure control in treated hypertensives is achieved in about 58% of patients and this control is obtained in more than half of cases with only the use of the combination of two or more antihypertensive drugs.

As mentioned above, the 2021 ESH/ISH meeting saw the presentation of two important documents, the ISH Global Practice Guidelines and the 2021 ESH Practice Guidelines for Office and Out-of-office Blood Pressure Measurements. The ISH Global Practice Guidelines are aimed at providing worldwide practice guidelines for the management of hypertension tailoring “essential” and “optimal” standards of care, particularly, but not exclusively, for low-resource countries. The background for this paper is the evidence that low-income and middle-income regions often follow the latest guidelines from high-income regions closely, as their resources and the ability of their health systems to develop and implement local guidelines remain challenging. In Africa, for example, only 25% of countries have hypertension guidelines, and in many instances, these guidelines are adopted from those of high-income regions. However, the adoption of guidelines from high-income regions are sometimes impractical as low-resource settings are confronted with a substantial number of obstacles, including severe lack of trained healthcare professionals, low access to basic office blood pressure devices, limited ability to conduct basic recommended diagnostic procedures and poor access to affordable high-quality medications.

The second document, the 2021 ESH Practice Guidelines for Office and Out-of-office Blood Pressure Measurements provides practice guidelines for blood pressure measurement. The main messages of this consensus paper are firstly,

that office blood pressure represents the most used and often the only method available for hypertension diagnosis and management, and is the value on which blood pressure classification and thresholds for treatment initiation and targets are based. Secondly, out-of-office blood pressure evaluation (ambulatory or home blood pressure) is necessary for the accurate identification of many untreated and treated individuals. Both methods are appropriate for hypertension diagnosis, treatment titration and long-term follow-up, taking into account that ambulatory blood pressure monitoring may be more suitable for the initial evaluation and home blood pressure for long-term follow-up. Finally, any two of the three methods (office, home, ambulatory) are necessary for reliable diagnosis.

The final session of the meeting was devoted to a debate on the role of aldosterone in hypertension pathophysiology and more generally in cardiovascular damage development. Dr Michael Stowasser (Brisbane, Australia) and Dr Morris Brown (London, England) were the two presenters, and from the debate, it became clear that the hyperaldosterone state as a cause of hypertension is quite frequently underestimated, but we should not forget that primary aldosteronism does not represent the sole curable cause of hypertension. This means that the diagnostic approach to the hypertensive state should include a careful assessment of all the possible known causes of the high blood pressure.

KEY REFERENCES

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This independent educational activity is made possible thanks to an educational grant received from Merck Healthcare KGaA, Darmstadt, Germany.

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Via di Porta Pinciana, 6 - 00187 Roma
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