Long-term adherence to therapy: the clue to prevent hypertension consequences

Luis M. Ruilope*

Hypertension Unit, Hospital 12 de Octubre and Department of Preventive Medicine and Public Health, University Autonoma, Madrid, Spain

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This editorial refers to ‘Adherence to antihypertensive therapy prior to the first presentation of stroke in hypertensive adults: population-based study’, by K. Herrtua et al., on page 2933

Cardiovascular (CV) disease is the leading cause of death worldwide, accounting for 30% of all deaths, and arterial hypertension is the most important modifiable risk factor to diminish this burden.1 According to the latest Guidelines, daily compliance and long-term adherence to therapy are the most important aims for the adequate control of arterial hypertension.2 As can be seen in Figure 1, the most relevant reasons for a poor or low compliance depend in the first place on a poor relationship between doctor and patient preventing the latter from attaining an adequate understanding of the relevance of the disease and its consequences. This is particularly so if the patient has received only a low level of education and is not helped by his/her partner or family. Side effects of medications, complicated treatment schedules, memory or psychiatric problems, and elevated cost of medications will also contribute to make the patient poorly compliant. It is recognized that patients with hypertension or hyperlipidaemia tend to take less than half of their prescribed medications.3 However, few studies have investigated the relevance of a low

Figure 1 Factors influencing a low adherence and its consequences. BP, blood pressure; CV, cardiovascular.

* Corresponding author. Unidad de Hipertensión, Hospital 12 de Octubre, 28041 Madrid, Spain. Tel: +34 629175770, Fax: +34 915765644. Email: ruilope@ad-hocbox.com

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adherence to treatment to the CV consequences of arterial hypertension, and none until the study of Herttua et al. has measured adherence repeatedly over a long period of time.

One of the most relevant findings of the study is that the presence of low compliance shortly after treatment initiation was observed in patients suffering a fatal or non-fatal stroke years later when compared with those who did not suffer such an event. The study also shows that short- and long-term risk of fatal and non-fatal stroke increased at each step down in the level of adherence. Confirming previous data, non-adherent patients suffering a stroke were older, less well educated, and had a lower household income. The fact that early total or partial discontinuation of therapy predicts the future development of a CV event reinforces the need for an adequate adherence to therapy consisting either of adequate lifestyle changes or of the subsequent addition of drugs from the beginning of treatment. In this sense, the VALUE trial proved that an adequate control of blood pressure obtained within the first 6 months of therapy was followed by a significantly lower number of CV events and death during the remainder of the follow-up in the trial. Otherwise, as a consequence of a low adherence to treatment, blood pressure will remain elevated, causing progressive CV and renal damage, and the potential existence of other non-blood pressure-dependent effects that facilitate the regression of CV and/or renal damage will not take place. Correction of low adherence in established hypertension has been shown to improve by using an approach to the disease involving a team of care givers constituted by different healthcare personnel, particularly nurses, through different modes of care delivery, and also through the use of information and communication techniques.

However, as demonstrated in the study of Herttua et al., an early adherence is required to arrest or slow down the progression of CV and renal damage. In this sense, it has been suggested that estimation of lifetime risk should be used as an adjunct to 10 years risk estimation particularly in subjects below the age of 50 years. Such a strategy could contribute to improve patient understanding of CV risk, to identify new sections of the population who might benefit from preventive therapy, and to motivate lifestyle changes and adherence to therapy early in the course of progression of the disease. An accurate perception of CV risk by both patients and physicians is essential for CV protection. Informing patients of their future risk of a CV event serves as the first step forcing them to make decisions about the ways to reduce that risk, and the principal is to adhere to adequate lifestyle changes and an adequate daily compliance with pills maintained for life.

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**References**


