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Olmesartan Medoxomil

A Viewpoint by Danilo Fliser

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The goal of modern antihypertensive therapy is not only effective blood pressure reduction, but also protection from cardiovascular end-organ damage. In this respect, some classes of antihypertensive drugs may be of particular benefit (i.e. inhibitors of the renin-angiotensin system such as angiotensin-converting enzyme inhibitors and angiotensin II (AII) type 1-receptor antagonists). Olmesartan medoxomil is a new highly selective and competitive nonpeptide AII-receptor antagonist with a strong affinity for the AII type 1 receptor. Studies in different animal models documented a dose-dependent reduction of blood pressure, favourable effects on organ damage and antiatherogenetic effects.[1]

Olmesartan medoxomil is a prodrug that is rapidly converted after oral administration to its active form, olmesartan, which has an elimination half-life of 10 to 15 hours.[2] Although olmesartan accumulates to some extent in elderly patients and in patients with renal failure, dosage reductions are not necessary except in patients with advanced renal failure.[3] Significant pharmacokinetic drug interactions have not been observed so far,[2] and, as with other AII receptor antagonists, the adverse event profile of olmesartan medoxomil is comparable with that of placebo.[4] All these points are particularly important because of the anticipated use of this promising new agent, especially in elderly patients and/or those with comorbid conditions. In addition, olmesartan medoxomil 10mg once daily was at least as effective in reducing blood pressure as standard antihypertensive drugs and other AII-receptor antagonists.[5]

Thus, olmesartan medoxomil is an effective and well tolerated antihypertensive drug with a long half-life (once-daily dosing) and absence of serious drug interactions. However, potential advantages over drugs from other antihypertensive classes with respect to cardiovascular endpoints have to be addressed in further clinical studies. ▲

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