

SUSTAINED ANTIHYPERTENSIVE ACTIVITY OF TELMISARTAN VS VALSARTAN
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Objective: Early-morning BP surge and 24-h mean BP are linked to target-organ damage and cardiovascular events. An antihypertensive should substantially reduce 24-h mean BP and have persistent activity throughout the dosing interval, particularly in the last 6 h and if a dose is missed. Among ARBs, telmisartan has the longest half-life (24 h). The objective was to compare the antihypertensive efficacy of telmisartan vs valsartan in the last 6 h of the dosing interval and after a missed dose.

Design and Methods: Hypertensive patients (seated cuff DBP 95-109 mmHg, 24-h mean DBP \geq 85 mmHg) received once-daily telmisartan 40/80 mg or valsartan 80/160 mg for 8 weeks in 2 identical multicenter, double-blind, parallel-group, forced-titration trials. The higher dose was given after 2 weeks' low-dose therapy. After 4 weeks' higher-dose therapy, 1 day's double-blind active therapy or placebo (missed dose) was given to patients in each study arm. After another 2 weeks' active therapy, patients previously given placebo received active therapy, and vice versa. ABPM was performed for 24 h at baseline and after the 2 'active/missed dose' days.

Results: Data from the 2 trials were combined as prospectively planned. After active therapy, last 6-h mean DBP was reduced by 7.6 ± 7.9 mmHg from 88.1 ± 8.1 mmHg with telmisartan ($n=447$) vs 5.8 ± 7.8 mmHg from 87.1 ± 7.5 mmHg with valsartan ($n=430$) ($p=0.0044$, adjusted for baseline, study, and treatment-by-study interaction). After the missed dose, 24-h mean DBP was reduced by 7.2 ± 6.5 mmHg from 93.4 ± 6.2 mmHg with telmisartan ($n=437$) vs 5.5 ± 6.2 mmHg from 92.8 ± 5.8 mmHg with valsartan ($n=431$) ($p=0.0004$). Absence of treatment-by-study interaction indicates that pooling of trial data is appropriate. All 24 hourly mean reductions with telmisartan were greater than with valsartan. Both treatments were equally well tolerated.

Conclusion: DBP reduction in the last 6 h of the once-daily dosing interval and 24-h mean DBP control when a dose is missed are significantly superior with telmisartan than with valsartan. Thus, telmisartan due to its longer half-life offers more sustained BP control, especially at the end of the dosing period and provides sustained efficacy in poorly compliant patients.