PRISMA II Trial

Background

- Blood pressure (BP) follows a circadian pattern with a morning surge that is associated with an increased risk of acute coronary and cerebrovascular events.

Aim

- To compare the efficacy and safety of telmisartan and ramipril in reducing ambulatory BP during the last 6 h of the 24-h dosing interval.

Study design

- PROBE (Prospective, Randomized, Open-label, Blinded-Endpoint) study

Study patients

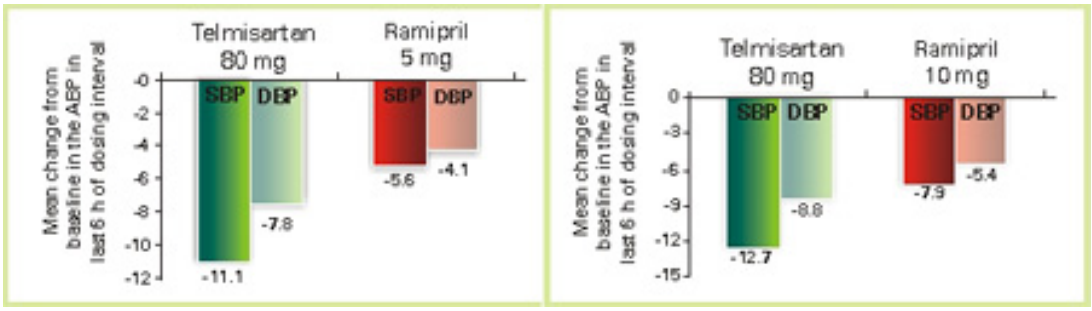
- 812 patients with mild to moderate hypertension [mean seated diastolic BP $\geq$ 95 mm Hg and $\leq$ 109 mm Hg and a 24-h ambulatory BP monitoring (ABPM) diastolic BP $\geq$ 85 mm Hg].

Study groups

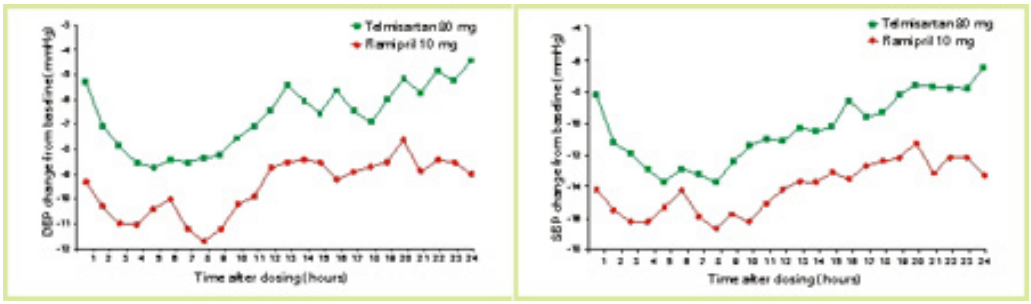
- Telmisartan initiated at 40 mg for 2 weeks, up-titrated to 80 mg for 12 weeks.
- Ramipril initiated at 2.5 mg for 2 weeks, titrated to 5 mg for 6 weeks and then to 10 mg for a further 6 weeks.

Results

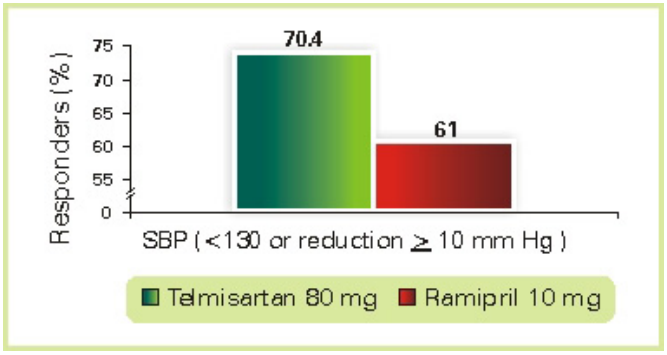
- Telmisartan 80 mg was superior to ramipril 5 mg and 10 mg in reducing the mean ambulatory BP during the last 6 h of dosing interval at 8 and 14 weeks, respectively.



- Significantly and consistently greater reduction with telmisartan 80 mg in controlling 24 h BP than ramipril 5 mg and 10 mg after 8 and 14 weeks of treatment, respectively.



- Greater ambulatory BP response rates in telmisartan-treated patients than among those treated with ramipril 5 mg and 10 mg.



- Significantly greater reductions in morning, daytime and nighttime mean ambulatory BP with telmisartan 80 mg compared to ramipril 5 mg and 10 mg.
- Patients treated with ramipril had a higher incidence of cough than those treated with telmisartan (10.1% vs. 1.5%, respectively).

Conclusion

- Telmisartan was consistently and significantly more effective than ramipril in controlling BP during the last 6 h of the dosing interval, a time when patients are at greatest risk of cardiovascular and cerebrovascular events.
- Both drugs were equally well tolerated, but telmisartan was associated with fewer instances of cough.

Reference

Am J Hypertens 2006; 19: 104-112