

ACE, ARB Equally Effective at Slowing Renal Damage

DETAIL is the first long-term, head-to-head trial of the two drug classes in patients with type 2 diabetes.

REVIEWED BY PROFESSOR ANTHONY BARNETT

A long-term comparison of an angiotensin receptor blocker (ARB) and an ACE inhibitor in patients with type 2 diabetes and nephropathy revealed that both are equally effective at slowing damage.

Glomerular filtration rate is widely accepted as the best measure of overall kidney function.

RENOPROTECTIVE EFFECTS COMPARABLE

At the European Society of Cardiology 2004 meeting in Munich, researchers reported that the ARB telmisartan and the ACE inhibitor enalapril had comparable renoprotective effects. The prospective, multicenter, double-blind, double-dummy parallel-group study Diabetics Exposed to Telmisartan and Enalapril (DETAIL), included 250 patients with type 2 diabetes,

hypertension and early nephropathy.

“DETAIL is a highly clinically relevant study,” said lead investigator Professor Anthony Barnett. “It provides the first comparative evidence on the long-term renal protective effects of an ARB versus an ACE inhibitor in patients with type 2 diabetes, hypertension and early nephropathy over 5 years.” Prof. Barnett, consultant physician and Clinical Director of Diabetes and Endocrinology, Birmingham Heartlands Hospital, UK, said, “It is particularly significant as it demonstrates that an ARB, telmisartan, is equivalent to an ACE inhibitor, enalapril, in providing renal protection.”

DETAIL AT A GLANCE

- DETAIL (Diabetics Exposed to Telmisartan and Enalapril) compared the ACE inhibitor enalapril with the ARB telmisartan in patients with type 2 diabetes, early nephropathy and hypertension.
- The trial was a prospective, multicenter, double-blind, double-dummy, parallel-group design that randomized 250 patients.
- Investigators evaluated GFR at years 1, 2, 3, 4 and 5.
- Telmisartan provided comparable renoprotective effects to enalapril, the researchers concluded.

DIRECTLY MEASURED GFR

Researchers said that glomerular filtration rate (GFR) is widely accepted as the best measure of overall kidney function in health and disease and is a major determinant of end stage renal disease. The endpoint of this study was change from baseline in GFR after 5 years, making DETAILS the first study of its kind to directly measure GFR to measure the progression of kidney disease.

Patients in DETAIL received either 80 mg telmisartan or 20 mg enalapril for 5 years. Although all patients had type 2 diabetes, hypertension and early nephropathy, the 5-year cardiovascular mortality in both treatment groups was much lower than what would be

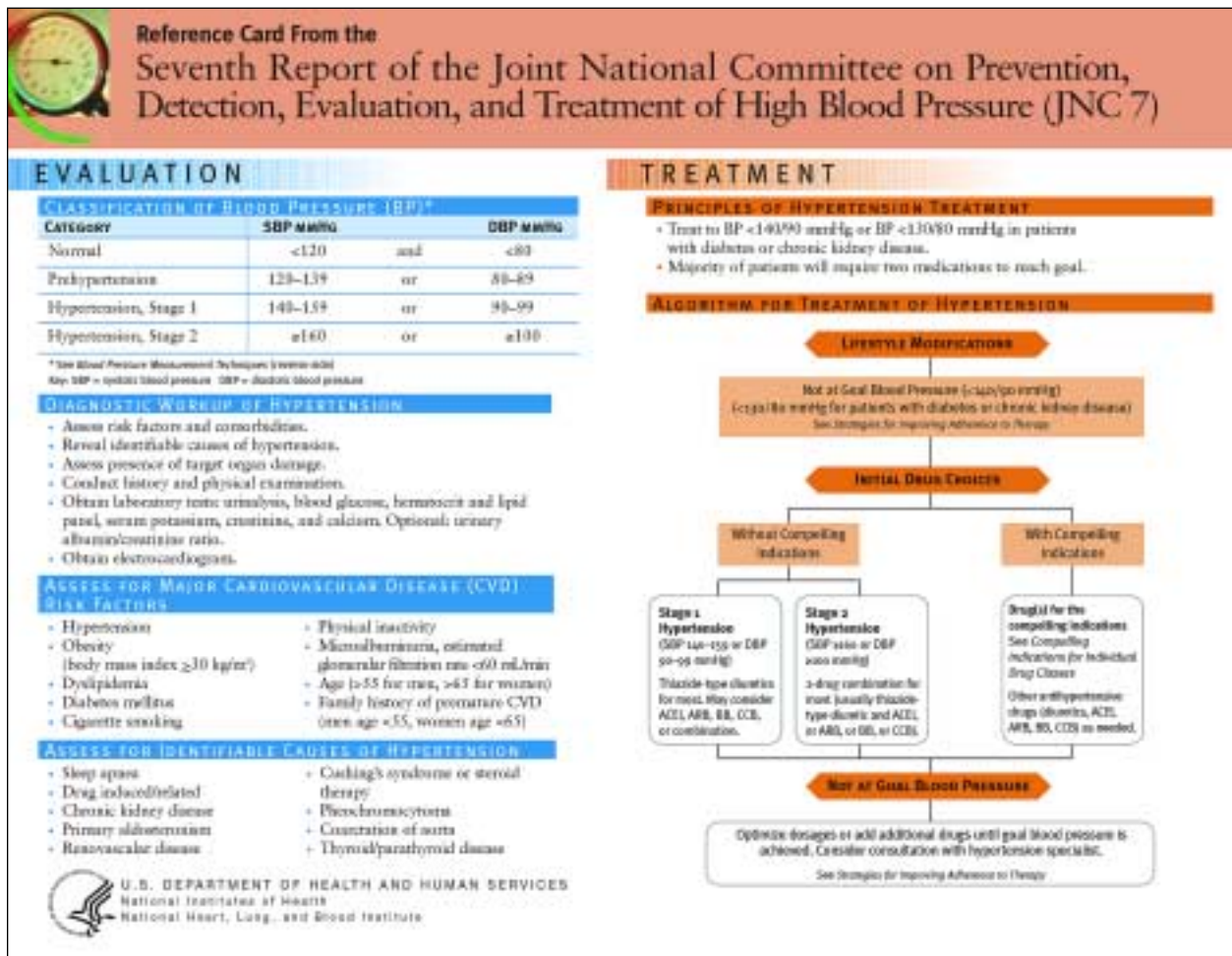


Figure 1. US hypertension guidelines physician reference card advocates ARBs and ACE inhibitors as first-line treatment.

expected in such a high-risk group, Prof. Barnett said.

The mean age of patients was 60 years and 27% were female. Investigators observed a change in GFR from baseline to 5 years of -17.9 mL/min/1.73 m² for patients assigned telmisartan versus -14.8 mL/min/1.73 m² for enalapril-assigned patients (not a statistically significant difference).

BLOOD PRESSURE LOWERING SIMILAR

Adverse events were similar among both groups and blood pressure was lowered to a comparable degree throughout the trial.

Currently, both US (Figure 1) and European hypertension guidelines advocate that ARBs and ACE inhibitors be used as first-line treatment for hypertensive patients with type 2 diabetic nephropathy. Studies have shown that effective blockade of the renin-angiotensin-aldosterone system can reduce renal damage by mechanisms above and beyond that which can

be attributed to blood pressure lowering alone.

TRIAL EVIDENCE STRONGER WITH ARBS

Clinical trials have revealed that renoprotection independent of blood pressure control associated with ACE inhibitors is derived mainly from observations of patients with type 1 diabetes. Trial evidence for renoprotection in patients with type 2 diabetes has been stronger with ARBs. Studies have found that ARBs are more effective than other antihypertensive classes for slowing the progression of kidney disease in patients with microalbuminuria or overt proteinuria. ■

Professor Anthony Barnett is a consultant physician and clinical director of diabetes and endocrinology at Birmingham Heartlands Hospital, Birmingham, UK. He can be reached at 44-0121-424-2176.

Barnett A. DETAIL: Diabetics exposed to telmisartan and enalapril. Presented at the European Society for Cardiology Congress 2004. Aug. 31, 2004. Munich.