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Prevention of progression of kidney disease

CARI guidelines

The CARI guidelines initiative is an Australia/New Zealand project that aims to provide high quality, evidence based clinical practice guidelines for the management of all stages of kidney disease. This article summarises the CARI guidelines on *Prevention of progression of kidney disease: diet and miscellaneous factors*. Complete CARI guideline detail is available at www.cari.org.au.

Data sources

Medline, Embase, Cochrane Clinical Trials Database.

Study selection and assessment

High level evidence (ie. systematic reviews of randomised controlled trials [RCTs] or standard RCT studies) was available. Guideline recommendations were developed using evidence from observational studies such as cohort, case control and case series studies.

Suggestions for clinical care

Dietary protein restriction

A protein controlled diet of 0.75–1.0 g/kg/day for adults is recommended.

Lipids

Hydroxymethylglutaryl-CoA (HMGCoA) reductase inhibitors may retard the progression of renal failure.

Exercise

There is no evidence that exercise training retards the progression of renal insufficiency.

Erythropoietin

Clinical evidence does not indicate either a beneficial or deleterious effect on the progression of renal impairment.

Other agents

There is limited evidence to suggest that the progression of certain forms of renal disease are retarded by ibopamine, however, this benefit is outweighed by serious side effects of ibopamine and cannot be recommended.

Other forms of dietary intervention

A carbohydrate restricted, low iron, polyphenol enriched (CR-LIPE) diet may slow the progression of diabetic nephropathy.

Uric acid

Treating hyperuricaemia does not retard the progression of renal failure and cannot be recommended. The use of

protein restricted diets in chronic kidney disease patients treated with allopurinol may require further reduction of allopurinol dosing.

Phosphate

Isolated phosphate restriction is not recommended.

Acidosis

No recommendations can be made regarding the use of alkali treatment specifically for the purposes of renoprotection.

Pregnancy

Pregnancy does not affect the course of renal disease in women who have normal or near normal renal function at conception, and they should not be discouraged from conceiving purely on the basis of their renal disease. Renal function deterioration is probably accelerated by pregnancy in patients with poorly controlled hypertension or plasma creatinine >200 $\mu\text{mol/L}$ at conception. The magnitude of this increase in risk compared with nonpregnant individuals with renal disease has not been established.

Smoking

Smoking is associated with more severe proteinuria and renal failure progression in patients with kidney disease. The clinical evidence for this association is stronger for diabetic patients. Stopping smoking has been associated with retardation of renal failure progression.

Other agents

There is limited evidence to suggest that the progression of certain forms of renal disease is retarded by nonsteroidal anti-inflammatory drugs (NSAIDs). However, they cannot be recommended due to serious side effects.

Conflict of interest: none declared.