kidney news

Volume 3, Issue 4 December 2001

CASE STUDY

A 63 year old man, new to your practice, is found to have worsening hypertension. BP usually been 140-160/80-90 on Inhibace 2.5mg alone. He used to be on atenolol but stopped because of lethargy, apathy, and "turned me in to a vegetable".
He has had gout for years and takes occasional Brufen. Prostatectomy 10 years prior, and asymptomatic of recurrence at present. He is a vegetarian. Continues as a successful senior business executive in a non-competitive relaxed occupation. He denies other stress factors, and feels great on his vegetarian diet!
Your assessment includes: full blood count (Hb 118 g/l, otherwise normal); MSU (large protein, otherwise normal); serum urea 13.6 and creatinine 0.210 mmol/l, K+ 4.1 mmol/l); total cholesterol 5.5 mmol/l, triglycerides 1.3; total : HDL ratio 4.2; uric acid 0.41 mmol/l; calcium, phosphate, liver tests all normal. Electrophoresis normal. Weight 78kg.

He is shocked you tell him he has kidney problems, and that he has proteinuria. On further questioning he recalls being told ten years prior in a "work survey" he was found to have proteinuria that "settled" when checked a few months later.

He subsequently undergoes a renal biopsy and is found to have hypertensive changes only, and the recommendation is aim for BP control with a systolic < 140 mmHg and diastolic < 80 mmHg, and preferably < 70 mmHg.

Three months later together you have achieved this with doubling the ACE and adding doxazosin 6 mg/day; but the creatinine has risen 0.24 mmol/l.

He now wants to minimise all risk factors. What can be done?

SUMMARY POINTS TO REDUCE CRF PROGRESSION

1. **ACE inhibitor.**
2. **aim for BP < 130/80 if proteinuria < 1 g/day.**
3. **reduce proteinuria.**
4. **possibly reduce dietary protein.**
5. **treat hypercholesterolaemia.**
6. **stop smoking.**
7. **avoid nephrotoxins.**

Introduction

2001 Christmas Edition.

MERRY CHRISTMAS
Already another Christmas!

I hope this year has been rewarding and resourceful to you, your practice and family. Thank you for all your referrals and faith; and I wish you the best for 2002. My practice clinics at Eastcare or Takanini are almost never full from week to week, so I can always see your patient within a week – unless I am out of town! Almost no one finds an evening clinic inconvenient, so I intend to continue these for the New Year, rather than being open during the daytime. I hope to enjoy our relationship in the up and coming year and beyond.

Please feel free to contact me for any renal or medical issue you feel I may be able to help with. My cellphone is the best way to contact me; and I can always return your call to minimise expenses to you!

This newsletter's theme is maximising remaining renal function in the chronic renal failure patient – or putting off that dialysis day as much as possible.

WHAT'S IN HERE THIS TIME?

DISCUSSION
Applicable to non-diabetic patients with chronic renal failure.

Hypertension.
Several studies now confirm the lower the blood pressure the better. Some of the better evidence showed there was even an importance to reduce BP more in patients with more proteinuria. The suggestion is if 24 hour proteinuria is < 1 g, then mean BP < 130/80 is the target. And if the proteinuria is > 1 g, then BP aim should be < 125/75. The study did not look at splitting levels of even greater proteinuria – eg, should the aim be < 120/65 if proteinuria > 3 g per 24 hours? Often these BP are just not obtainable, but we should be more aggressive in trying to achieve them – if other morbidity (eg. symptomatic postural hypotension) does not contraindicate this target. I have previously pushed the diastolic as low as possible, but now am trying to address the systolic more aggressively than I used to. Dietary advice - salt intake, weight reduction (not in this case), exercise along with medications are part of the management.

ACE inhibition.
The renal sparing evidence in diabetics of ACE inhibitors over and above the BP control has now been duplicated in non – diabetics with chronic renal failure (CRF). This benefit is over and above that achieved by blood pressure fall alone. 41 to 53% reduction in progression of CRF has been recorded in some studies over 2 to 3 years. Many still progressed with their CRF, but it was slower.

Proteinuria.
Some recent evidence has confirmed much older theories of the toxicity of protein in the renal tubules. Reducing the amount of proteinuria independently reduced the progression of CRF. Why? It is all speculation. Further support for the use of ACE inhibitors – now even in the absence of hypertension. Generally ACE inhibitors can be expected to reduce the proteinuria by around 50%. Almost time for ACEIs to be in the water supply!

Dietary protein restriction.
Probably not relevant in our case study as he is a vegetarian. But, dietary protein restriction in CRF must only be embarked upon under the guidance of a renal skilled dietitian. Without proper supervision protein malnutrition may develop, which is more serious than the CRF itself – associated with a high mortality early on in dialysis.

Cholesterol lowering and smoking cessation.
Evidence is not here. But we know vascular disease in patients with CRF progresses more rapidly than in the normal population – so it seems reasonable to extrapolate that the CRF patient should have their cholesterol even more aggressively managed. Hopefully Pharmac will relax the rules for statins – as these are the only "safe" agents to use in CRF. To stop smoking needs no reiteration.

Avoidance of nephrotoxins.
Often overuse of diuretics – even misuse of them by patients occurs, but fortunately is usually reversible, with the creatinine returning to baseline. NSAIDs for gout and arthritis still remain the biggest culprits, especially OTCs. And the COX-2 inhibitors are not innocent, but are less of a problem.

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Interests

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Management of urinary tract infections
Investigation of urinary calculi
Investigation of proteinuria and haematuria
Investigation and management of impaired renal function.
Renal nutrition.

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