Medical Profile Project 2012

Chapter 7: Renal Medicine Commentary

Percentage of dialysis patients treated by peritoneal dialysis

The proportion of dialysis patients in Scotland who are treated by peritoneal dialysis (PD) has fallen from just over 400 patients and 24% of all dialysis patients at the end of 2001, to under 300 patients and 13% of all prevalent dialysis patients at the end of 2010. This reduction has occurred despite an increase in the number of patients treated by all types of dialysis of nearly 500 individuals over the same time period [Scottish Renal Registry report 2010]. This decline in numbers may reflect patient choice.
The Renal Association clinical practice guideline for peritoneal dialysis [July 2010] recommends that*: 'Both continuous ambulatory peritoneal dialysis (CAPD) and automated peritoneal dialysis (APD), in all its forms should be available. Assisted PD should be available to patients wishing to have home dialysis treatment but unable to perform self-care PD.'*
NICE guidance [Clinical guideline 125; July 2011] further suggests that PD should be considered the treatment of choice in children aged 2 and younger, in people with residual renal function and in adults without significant associated comorbidities.

Percentage of dialysis patients treated by home haemodialysis

The number of individuals in Scotland treated by home based haemodialysis has not significantly changed over the ten years 2001-2010 and was the dialysis type used for around 2% of all dialysis patients over that time period. [Scottish Renal Registry report 2010]
The Renal Association clinical guideline for haemodialysis [December 2009] recommends that: '*all patients who may be suitable for home dialysis should receive full information and education about home haemodialysis'.*
NICE guidance endorsed by the Health Technology Board for Scotland (HTBS) [Technology appraisal 48; September 2002] likewise recommends that all suitable patients be offered the choice between home haemodialysis or haemodialysis in a hospital/ satellite setting. The assessment found home, when compared with hospital based haemodialysis to be clinically effective and lower in cost. The guidance NICE suggests that 10-15% of dialysis patients might be expected to opt for home haemodialysis if given the choice.

Percentage of patients on haemodialysis using arteriovenous access

The percentage of patients in Scotland treated with haemodialysis who have arteriovenous access in use for their dialysis has not changed over three consecutive years 2009-2011 remaining at 75-76% [Scottish Renal Registry report 2010]. The alternative to arteriovenous access is a central venous catheter (either sub-cutaneously tunnelled or non-tunnelled); these are associated with morbidity and mortality.
The Renal Association clinical guideline for vascular access for haemodialysis [January 2011]

recommends: '*that venous catheters should be employed as a method of last resort for longer term vascular access to reduce the overall risk of infectious complications in haemodialysis patients'*. The guidance suggests as an audit measure that '*85% of all prevalent patients on haemodialysis should receive dialysis via a functioning arteriovenous fistula'.*

Percentage of patients on haemodialysis who have a staphylococcus aureus bacteraemia

The data presented in this medical profile indicator describe the frequency of staphylococcus aureus bacteraemia (SAB) episodes in 2009, expressed as a percentage of the number of haemodialysis patients receiving haemodialysis in the NHS Board area in question in the same year. While one patient may of course account for more than one of the bacteraemia episodes recorded by the Scottish health protection agency expressing the overall SAB episodes as a percentage (or rate per 100 patients) allows useful comparison between NHS board areas.
Reducing episodes of healthcare associated staphylococcus aureus bacteraemia (SAB) is a Scottish Government HEAT target.
The Renal Association clinical guideline for vascular access for haemodialysis [January 2011] recommends as an audit measure that 'The annual Staphylococcus aureus bacteraemia rate in the prevalent haemodialysis population should be less than 2.5 episodes per 100 HD patients'.

Standardised Mortality Ratio at one and five years after starting renal replacement therapy

Ideally survival analyses of patients starting renal replacement therapy should be standardised to take account of the presence of other illness and comorbid conditions, the data are not available to do that and the survival analyses presented here are adjusted for expected mortality for that NHS health board area only.

Percentage of dialysis patients on the waiting list for a kidney transplant

Patients' survival following renal transplantation is better compared than age-matched individuals remaining on the transplant waiting list. Many patients are not fit enough for a transplant operation nor the necessary subsequent immune suppressing treatment and so are appropriately not listed. Within Scotland all adult kidney transplant operations have been performed in either the Royal Infirmary of Edinburgh or the Glasgow renal and transplant unit.
The Renal Association clinical guideline assessment of the potential kidney transplant recipient [January 2011] recommends: '*that kidney transplantation should be the renal replacement therapy of choice for patients with chronic kidney disease stage 5 who are considered fit for major surgery and for chronic immunosuppression*'. In addition the guideline recommends: '*that there must be demonstrable equity of access to deceased donor kidney transplantation irrespective of gender, ethnicity or district of residence'*.

Median waiting time from start of RRT to listing for first kidney transplant

This is an important outcome and variance is likely to reflect differences in practice and possible areas for improvement.

The Renal Association clinical guideline, planning initiation and withdrawal of RRT [September 2009] recommends: *'that all suitable patients should be listed for cadaveric transplantation six months before the anticipated start of renal replacement therapy'.* The guideline also suggests the audit measure: *'The time to placement on the UK Transplant national transplant list in relation to start date of dialysis'.*

Across the UK as a whole there is evidence of significant differences between renal units in the time taken to register patients on the national transplant list that cannot be explained by differences in patient characteristics. [Ravanan R et al. Variation between centers in access to renal transplantation the UK; longitudinal cohort study. BMJ 2010]