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LETTER TO THE EDITORS

The ideal timing of ureteric stent removal in transplantation patients

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Dear Sirs,

With great interest, we read the paper by Alberts *et al.* [1], in which the authors report the results of their systematic review of urological complications following various ureterovesical anastomotic techniques. The authors included a subanalysis of the effect of stenting on outcomes from various ureterovesical anastomotic techniques. The authors compared the impact of stenting and nonstenting to assess the amount of bias, and this may have contributed to the rates of urological complications between different ureterovesical anastomotic techniques. These analyses did not show significant differences between the outcomes for both stented and nonstented groups. However, we feel that it is an oversimplification to cohort all studies using ureteric stents together as the duration of ureteric stent *in situ* is a significant factor in longer-term morbidity and it may obscure differences in outcomes between shorter- and longer-term stent durations.

The authors note that there were different durations of ureteric stenting within the stented study group and that there is a risk of urinary tract infection (UTI) with stents *in situ* for longer periods. However, they did not conduct a subanalysis based on ureteric stent duration *in situ*. The ideal timing of stent removal post-transplantation is a contentious issue. The authors have explained that there were not enough data in the included studies to assess the effect of ureteric stenting on UTIs and so we have collated our centres' longer-term data on this topic to contribute our experience of ureteric stenting.

The guideline at our institution is for ureteric stent removal at 6 weeks post-operatively. We investigated how the rates of UTI varied on the duration of ureteric stent *in situ*. We conducted a retrospective observational study on all patients who had ureteric stents inserted postrenal transplantation between January 2009 and March 2013 at our centre. A total of 404 patients were included. The average age of the cohort was 47.8 years (SD 12.7) of which 51 patients (14%) had UTIs. A large proportion of patients (26%) had their stent removed 7–8 weeks post-operatively. The reasons for late removal were pragmatic; however, there was no increase in UTI rate in this cohort compared with patients who had their stent removed before 7 weeks (Table 1). The average age of patients who had complications was 50.2 years (SD 12.5).

Several studies have concluded that early stent removal at 1 week [2,3], 2 weeks [4,5], 4 weeks [6] and 4–6 weeks [7] is beneficial. However, these studies have not assessed UTI risk in stents as long as 6–8 weeks *in situ* [2,8], and our cohort is the largest study on longer-duration stents and shows that this risk appears to tail off over time (Table 1) and is not linearly related to the duration of stent *in situ* as previously perceived [3].

It is clear that the duration of stents is important for UTIs, and so, it may be equally important when considering urological complications from different anastomotic techniques. It may be possible that the outcomes from the stented group described by Alberts *et al.* [1] may be confounded if outcomes from studies with longer-duration stents are obscured by results from studies with

Table 1. Demonstrating the number of patients who suffered from urinary tract infections (UTI) in relation to the duration the ureteric stent remained *in situ*.

	Duration stent *in situ*			
	<5 weeks	5–7 weeks	>7 weeks	Total
No UTI	24	152	177	353
UTI	7	25	19	51
% UTI	23%	14%	10%	13%
Total	31	177	196	404

Response to recent article: Alberts VP, Idu MM, Legemate DA, *et al.* Ureterovesical anastomotic techniques for kidney transplantation: a systematic review and meta-analysis. Transplant international: official journal of the European Society for Organ Transplantation. 2014 (published online first).

shorter-duration stents, hence resulting in no significant differences between stented and nonstented groups. However, as Alberts *et al.* highlights, further work is required to investigate the outcomes from various ureteric stent durations.

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Conflicts of interest

None.

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Ethics

This is retrospective observational study, and hence, ethical approval was not required.

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