Letters to the Editor

Table 1. The outcome of locking tunneled hemodialysis catheters with cefotaxime and heparin in terms of catheter thrombosis, CRBSI incidence, and CRBSI-related mortality (July 2002–June 2003)

<table>
<thead>
<tr>
<th>Catheter events</th>
<th>Control group (N = 19)</th>
<th>Study group (N = 67)</th>
<th>Relative-risk reduction (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>(heparin alone, catheter days) N, total, %</td>
<td>(cefotaxime + heparin, 24,455 catheter days) N, total, %</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Catheter thromboses</td>
<td>6/19 (31.5)</td>
<td>9/67 (13.4)</td>
<td>57.3%, 1.340-4.701, 0.003</td>
</tr>
<tr>
<td>CRBSI episodes</td>
<td>17/19 (2.45/1000 catheter-days)</td>
<td>14/67 (0.57/1000 catheter-days)</td>
<td>76.7%, 3.086-6.430, &lt; 0.0001</td>
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<tr>
<td>CRBSI-related mortality</td>
<td>5/19 (31.6)</td>
<td>7/67 (10.4)</td>
<td>67.1%, 1.517-5.864, &lt; 0.001</td>
</tr>
</tbody>
</table>

95% CI, 95% confidence interval; CRBSI, catheter-related blood-stream infections.

*aCefotaxime-heparin ‘lock’ solution composition, cefotaxime: 10 mg/mL, heparin: 5000 U/mL (to fill 1.3 mL in venous and 1.2 mL in arterial lumen of the catheter with combined volume of approximately 2.5 mL containing total of 25 mg of cefotaxime).

The differential impact of risk factors on mortality in hemodialysis and peritoneal dialysis

To the Editor: In the article by Vonesh et al [1], discrepancies in survival on different treatment modalities for different patient groups is described in a large cohort of patients. Although a considerable number of comorbidity conditions were included for this variable, I feel that a major variable (i.e., the failed transplant recipient returning to dialysis) should have been included, or preferably should have been added as a separate risk factor for mortality in dialysis patients.

These patients are at high risk for premature death, excluding death within the first 90 days after starting dialysis, especially when they continue even low dose immunosuppressive medication during dialysis [2, 3]. Furthermore, these patients generally start on hemodialysis during the first period after transplant failure (i.e., the first year after graft failure). This would negatively influence the outcome for this treatment modality as compared to peritoneal dialysis with regard to mortality, and would, therefore, be another plausible explanation for the high initial mortality associated with hemodialysis found in this study.

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REFERENCES

(RCC) compared with the general population. We have reported that connexin (Cx) 32, a member of gap junction, acts as a potential tumor suppressor gene in the RCC with tissue specificity [1], and that loss of function of the Cx gene during hemodialysis is caused by hypermethylation of CpG island in promoter region of the Cx gene, but not mutation/deletion of the Cx gene [2]. Thus, if the epigenetic inactivation of Cx32 should be abrogated by pharmacologic treatment without any toxicity, the treatment may lead to establishment of a new preventive procedure against the RCC from hemodialysis patients.

Of agents to release epigenetic inactivation of tumor suppressor genes, zebularine, a cytidine analogue containing a 2-(1H)-pyrimidinone, possesses some properties desirable for a therapeutic agent because the agent is very stable and has an extremely low toxicity, unlike a representative DNA demethylating agent, 5-Aza-2′-deoxycytidine [3]. We have recently demonstrated that DNA demethylation by 5-Aza-2′-deoxycytidine restores the expression of Cx32, and reinduces tumor-suppressive effect of the Cx gene against RCC [4]. Additionally, we have confirmed that, of silenced tumor suppressor genes, zebularine specifically up-regulates Cx32 gene in the RCC through DNA demethylation, and that the re-expression is closely associated with negative growth control of the RCC. These results suggest that zebularine is an effective agent to specifically restore the tumor-suppressive effect of Cx32 in kidney, and to establish a new preventive strategy against the RCC from hemodialysis patients.

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