POS-624
ROLE OF GENTAMYCIN LOCKING SOLUTION IN THE PREVENTION OF CRBSI

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Introduction: CRBSI is one of the most important complications of using Dialysis Catheter as a means of vascular access in haemodialysis. Various catheter locking solutions have been used to prevent this complication.

The study aimed to assess the effectiveness of Gentamycin as a locking solution for the prevention of CRBSI in maintenance hemodialysis patients.

Methods: This was a randomised controlled study which included all the patients of ESRD who required uncuffed catheter as a means of temporary vascular access. The patients of AKI, those having fever or antibiotic treatment, those with a history of allergy to Gentamycin, and those with AVF rupture were excluded from the study. A total of 48 patients were enrolled, and they were divided into two groups: group 1 received 60 ml of gentamycin locking solution (80 mg) + 2 ml of normal saline every 48 h (Group 1), and group 2 received heparin locking solution (1000 UI/ml) + 2 ml of normal saline every 48 h (Group 2).

Results: There were no statistically significant differences in the baseline characteristics between the two groups. The rate of CRBSI in the treatment group was 2% and in the control group was 5%. The number of days for the development of CRBSI following catheter insertion in group 1 & 2 were 7.0 ± 5.68 and 10.3 ± 8.35 days (P=0.88).

Conclusions: Gentamycin as a locking solution is a potential option for the prevention of CRBSI in patients on maintenance hemodialysis. Further research is needed to confirm these findings.

POS-625
THE CASE FOR REDUCING COMPLEXITY IN DIALYSIS NURSING CARE

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Introduction: Dialysis units face an increasing shortage in qualified healthcare professionals (HCP’s). Research suggests an inverse correlation between HCP workload and patient care quality. Multiple studies have suggested that staff shortages and the clinic work environment affect patient and organizational outcomes, resulting in higher workloads and more stressful work environments. Ultimately, this may lead to staff disengagement, burnout, absenteeism, voluntary turnover, reduced patient satisfaction and potentially adverse patient outcomes. In addition to patient care, nurses are confronted with a wide variety of responsibilities related to administration, scheduling, patient education, care coordination, compliance with regulations and other ad hoc tasks. This study examines how reducing complexity in daily haemodialysis (HD) process steps could contribute to relieving nurse workload to free up more time for patient care.

Methods: This observational study was conducted in 3 phases. In phase 1, a typical working day in a dialysis unit was mapped in accordance with best practice standards. In phase 2, a Delphi panel of 19 international, multidisciplinary experts was established, and the initial mapping was discussed in 10 moderated rounds (2 moderators) to achieve consensus on the nursing workflow including preparation, patient connection, treatment, reinfusion, patient disconnection, incident management and post-treatment steps. Based on this consensus, the experts assessed in a third phase, how a combination of modern dialysis devices, water treatment systems and digital technologies (Setup B) could potentially improve daily process steps in comparison to a conventional dialysis clinic set-up (Setup A).

Results: In expert interviews, a total of 146 process steps were identified over the course of a single HD session (Table 1). In Setup A, a total of only 10 out of 146 process steps were improved, while in Setup B 95 out of 146 process steps were improved. Hence, the net improvement achieved with Setup B vs. Setup A was 85 process steps. This equates to a 58% improvement of total number of process steps.

Table 1: Analysis of the daily process step improvement potential

<table>
<thead>
<tr>
<th>No. of Improved Process Steps</th>
<th>Setup A</th>
<th>Setup B</th>
<th>Net Improvement</th>
</tr>
</thead>
<tbody>
<tr>
<td>Preparation</td>
<td>20</td>
<td>16</td>
<td>4</td>
</tr>
<tr>
<td>Treatment</td>
<td>11</td>
<td>10</td>
<td>1</td>
</tr>
<tr>
<td>Post-treatment</td>
<td>14</td>
<td>13</td>
<td>1</td>
</tr>
<tr>
<td>Total No. of Process Steps</td>
<td>45</td>
<td>39</td>
<td>6</td>
</tr>
</tbody>
</table>

Conclusions: This analysis focused on daily process steps of nurses in renal care delivery and how they could potentially be improved by utilizing a combination of modern dialysis devices, water treatment systems and digital technologies. Our results suggest that the introduction of modern technologies may reduce the complexity in daily nursing care.