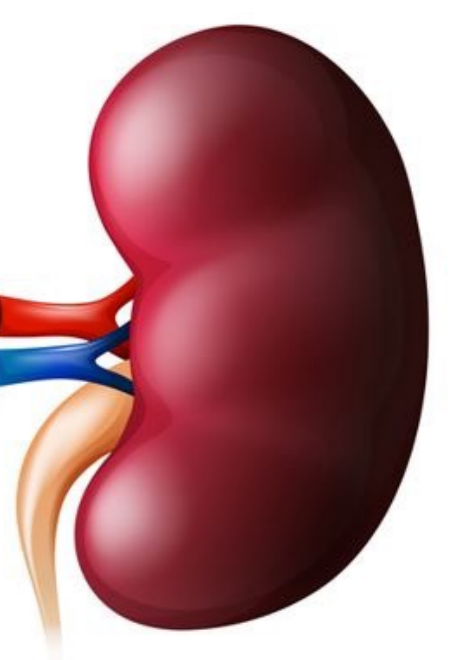
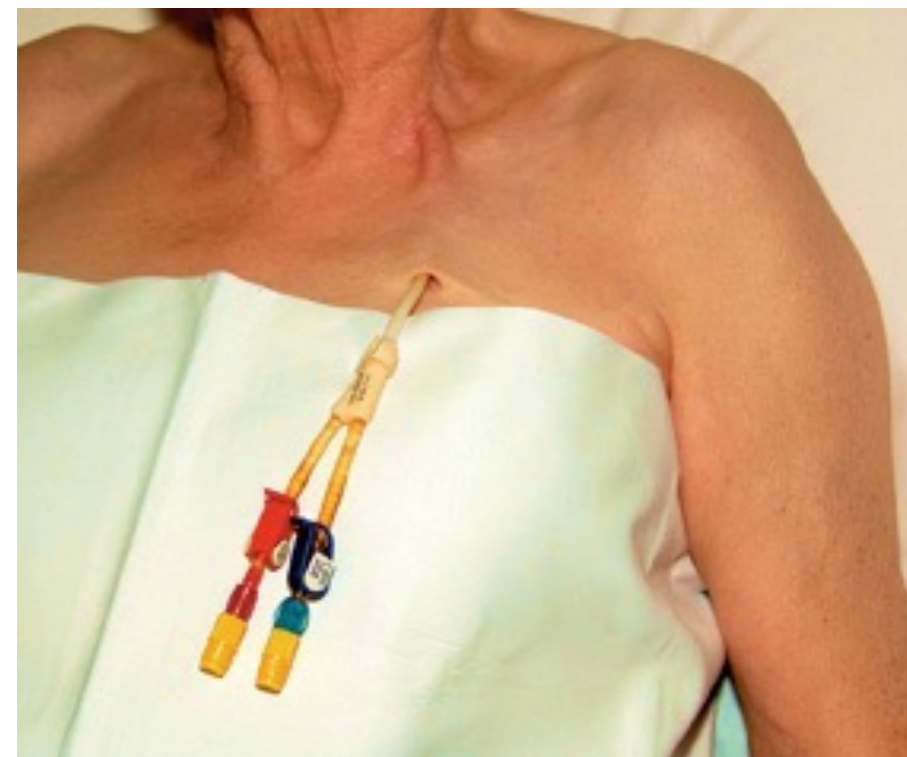


Management of dysfunctional haemodialysis lines requiring urokinase



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Introduction



A common cause of catheter dysfunction is thrombus formation. Treatment can involve clinical risk, expensive drugs, and ultimately reinsertion with patient discomfort.

Aims

To ensure optimal management of dysfunctional haemodialysis catheters.



Objectives

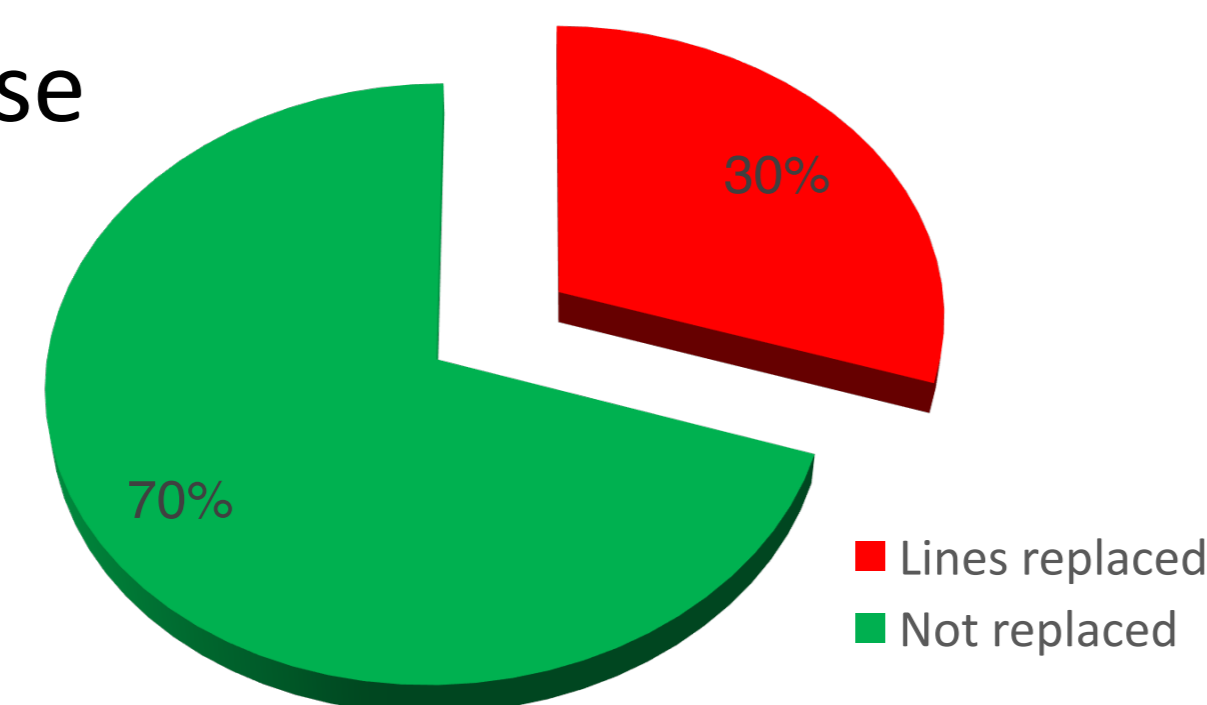
1. To confirm guidelines were followed correctly
2. To reduce avoidable haemodialysis line replacement
3. To ensure that expensive line unblocking drugs were being used appropriately

Methodology

Retrospective audit over 3 months. Identified patients prescribed urokinase in this period using EMED and audited using a standardised proforma.

Initial results

- 40 patients had dysfunctional lines requiring needed urokinase
- Evidence that guidelines were not being followed
- 30% of these patients required a line replacement

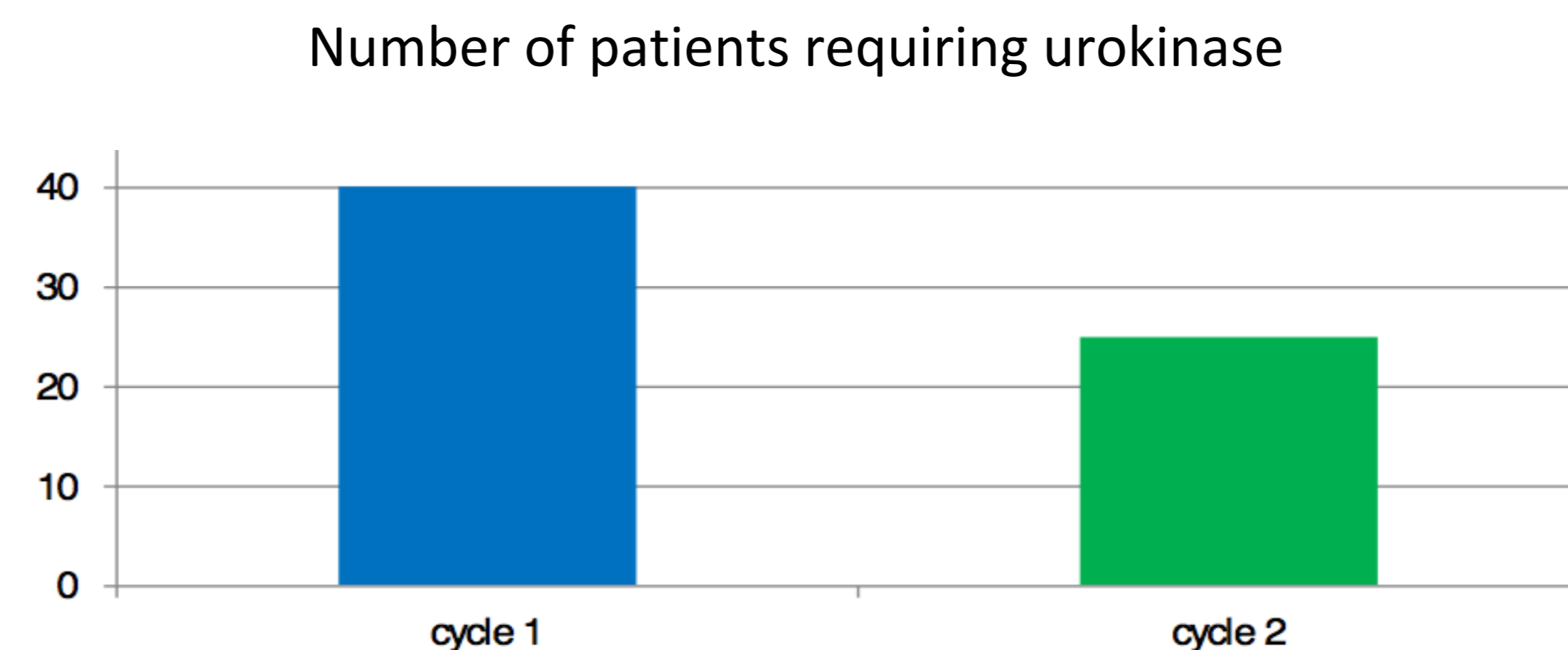


Implementation

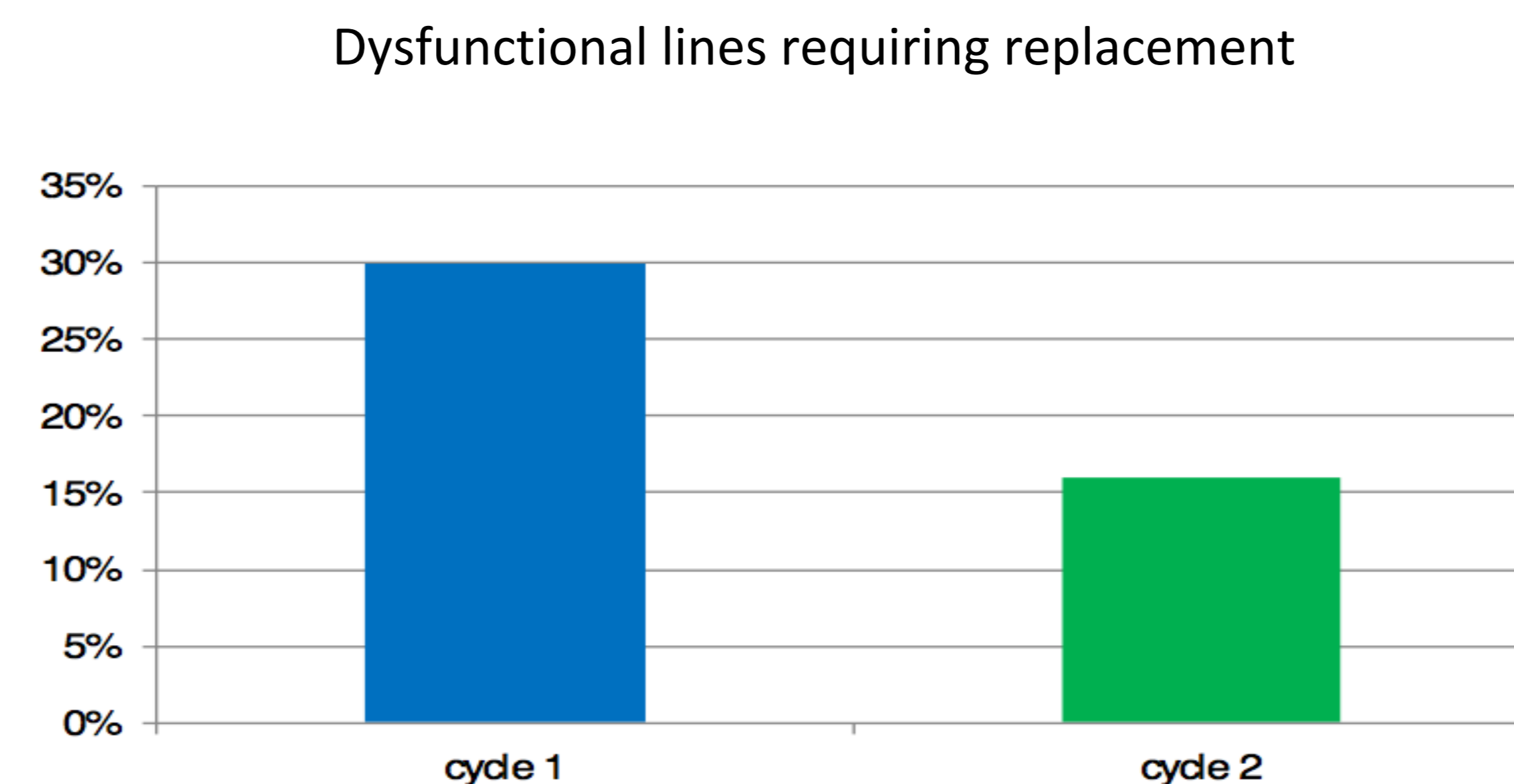
1. Presentation of results to renal department
2. Improved awareness and training for nursing staff
3. Education of new doctors on appropriate use of Trust guideline when line dysfunction occurred

This was followed by a re-audit using identical criteria.

Re- Audit Results



There was a 37.5% reduction in patients requiring urokinase for their lines between the 2 audit cycles.



There was a significant reduction in the number of the dysfunctional lines needing replacement from 30% to 16%.

Impact to Patient Care

The enhanced training for the nursing staff contributed to a lower number of dysfunctional lines and less patients requiring urokinase.

Collectively the interventions were associated with an overall reduction in the number of lines needing replacement from 12 to 4 (67% reduction).

Conclusions

The audit and re-audit cycle were associated with significant improvement in patient care.

The initial audit identified key areas of improvement. It showed a large number of dialysis lines were becoming dysfunctional and subsequent management was suboptimal resulting in a high number needing replacement.

Following educational interventions the re-audit confirmed there was a considerable improvement in both of the originally highlighted areas.

Future Actions

Following the re-audit we surveyed the medical staff and identified ongoing difficulties with complexity and visualisation of the dysfunctional line guidelines.

We are now developing a more user friendly version.

Acknowledgements

We would like to thank the staff working in the Belfast City Hospital Dialysis Unit.

