

# PERIOPERATIVE DIABETES MANAGEMENT IN HIP FRACTURE

## PATIENTS: A SINGLE-CENTRE AUDIT

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### BACKGROUND

Diabetes is prevalent (15%) in patients undergoing hip fracture surgery, with inadequate perioperative management linked to poor outcomes<sup>1</sup>. National audits, including NCEPOD<sup>2</sup>, have highlighted inadequate diabetes care during the perioperative period, with a 7.7% incidence of postoperative adverse events in diabetic patients. This audit assessed compliance with the CPOC guidelines<sup>3</sup> at Ealing Hospital.

### METHODS

Two audit cycles: Aug 2024 – Jan 2025 & May – July 2025.

Intervention: in-person teaching to MDT, online distribution of summary of guidelines, and poster.

Data: Collected via patient care records. Key areas assessed were theatre list prioritisation, medication management, capillary blood glucose (CBG), electrolyte monitoring, and variable rate insulin infusion (VRIII) initiation.

### GUIDELINE SUMMARY



### RESULTS

- Statistically significant improvement in daily U+E monitoring for diabetic and CKD patients ( $p=0.01$ ).
- Patients still not prioritised as first on list – likely due to more urgent cases being prioritised (Table 2)
- Increase in appropriate medication withholding, CBG monitoring, and VRIII management, daily ketone checks when holding SGLT2 inhibitors, appropriate fluid prescription alongside VRIII, hourly CBG monitoring in the first 12 hours of VRIII
- The small sample size limits the statistical power of the analysis, reducing the likelihood of detecting clinically significant differences.

Table 1.1: Demographics

|                       | First Cycle (n=94) | Second Cycle (n=34) |
|-----------------------|--------------------|---------------------|
| Average age           | 82 (65–92)         | 77 (64–90)          |
| Diabetic patients (%) | 28                 | 29                  |

Table 1.2: Demographics for diabetes

| Diabetes patients   | First Cycle (n=26) | Second Cycle (n=10) |
|---------------------|--------------------|---------------------|
| T2DM (%)            | 96                 | 100                 |
| CKD (%)             | 50                 | 60                  |
| Insulin therapy (%) | 19                 | 30                  |

Table 2: Comparison between the two cycles

|  | First Cycle | Second Cycle | p-value |
|--|-------------|--------------|---------|
| Operated first on the list (%)                       | 58          | 40           | 0.46    |
| Medication held on surgery day (%)                   | 71          | 100          | 0.49    |
| CBG monitoring                                       | 100         | 100          | -       |
| Daily U+E for CKD patients                           | 31          | 100          | 0.01    |
| Appropriate VRIII prescription                       | 54          | 83           | 0.33    |
| Daily ketone checks when holding SGLT2 inhibitors    | 0           | 33           | 0.02    |
| appropriate fluid prescription alongside VRIII       | 86          | 100          | 0.56    |
| hourly CBG monitoring in the first 12 hours of VRIII | 57          | 80           | 0.02    |

### REFERENCES

### CONCLUSION

This audit highlights significant gaps in perioperative diabetes management in hip fracture patients. Considerable improvements were seen following targeted interventions, however, further efforts are needed to optimise care and enhance patient outcomes.

