

Utilising perioperative medicine to improve outcomes for patients with diabetes undergoing lower limb arthroplasty

Dr Y Yap¹, Dr N Levy² 1: Speciality Registrar, Royal Papworth Hospital
2: Consultant Anaesthetist, West Suffolk Hospital

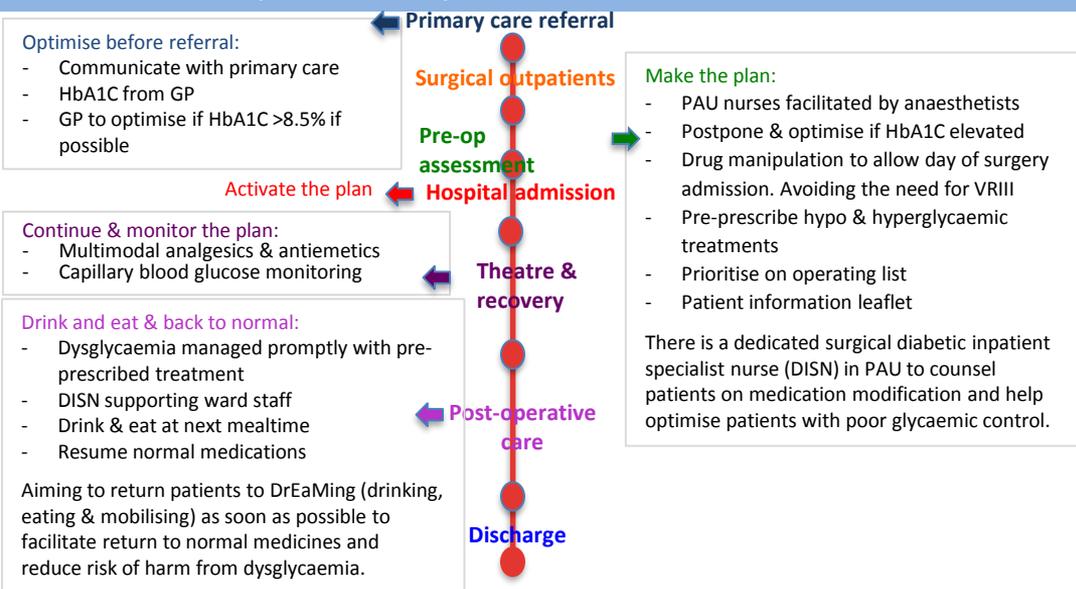
Introduction

Diabetes is the most common metabolic disorder affecting 7% of the UK population and 18% of the inpatient population. It is associated with increased risk of co-morbidities, complex polypharmacy, adverse outcomes post-operatively and increased length stay (LOS). The use of a VRIII also predisposes patients to drug errors, hypo & hyperglycaemic episodes.

PQIP identified perioperative diabetes management as one of its top 5 national improvement opportunities. The annual report highlighted that 31% of patients did not have a HbA1C reading within 3 months of surgery and 20% had a HbA1C higher than the recommended upper limit of 8.5%

At the West Suffolk Hospital, patients with diabetes undergoing elective lower limb arthroplasty (LLA) are managed in a perioperative medicine (POM) approach in addition to the already established enhanced recovery programme. The POM pathway for these patients is in line with the JBDS guidelines and AAGBI recommendations on management of patients with diabetes undergoing elective surgery.

Perioperative Pathway for Patients with Diabetes at the WSH



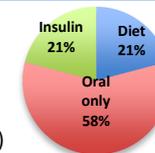
With this POM approach, can patients with diabetes undergoing elective LLA get comparable LOS at the WSH?

Method

Retrospective case notes review of patients undergoing primary LLA from June to December 2016. Data collected on whether the patient has diabetes, the type of diabetes, HbA1C within 3 months of surgery and LOS.

Results

- 334 patients identified. 43 with diabetes. All with type 2 diabetes. The diagram shows the type of treatment the patient was receiving.
- Graphs showing LOS of patients with total hip replacements (left) and total knee replacements (right)



	THR	Non DM	DM		TKR	Non DM	DM
Number		180	18	Number	154		25
Median LOS		3	5	Median LOS	3		4
Mode LOS		2	2	Mode LOS	2		4
P value		0.36		P value	0.06		

- All patients undergoing LLA had a HbA1C within 3 months of surgery with an average of 7.1%. 11% of patients had a HbA1C higher than the recommended limit of 8.5%. This compares with PQIP data that demonstrates that only 69% of patients had a HbA1C recorded and 20% of these were above 8.5%.

Conclusion

The implementations of the POM pathway promotes multidisciplinary teamworking, patient education and early DrEaMing. By adopting the pathway, we can optimise patients with diabetes undergoing elective LLA to achieve comparable LOS therefore reducing complications through increase LOS.

References

- Perioperative Quality Improvement Programme. Perioperative Quality Improvement Programme. Annual report 2017-18.
- Joint British Diabetes Societies Inpatient Care Group. Management of adults with diabetes undergoing surgery and elective procedures: improving standards. April 2011.