

FOUNDATION SEMINAR IN SURGERY AND PERIOPERATIVE MEDICINE

**Case Study 4: Perioperative Diabetes Management**

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*Reviewed by the SHPA Surgery and Perioperative Specialty Practice Stream Leadership Committee, February 2019*

*Updated by Galahad Gu, January 2021*

**Mr DM is a 60-year-old male with a past history of gout, osteoarthritis, hypertension, high cholesterol, depression and diabetes. His current medications include perindopril 10mg daily, atorvastatin 40mg daily, allopurinol 300mg daily, Panadol Oseto 1330mg three times a day, ibuprofen 200mg prn, sertraline 50mg daily, metformin 1g XR daily and gliclazide 60mg daily.**

**He is referred to the orthopaedic surgeons for investigation of right knee replacement(TKR).**

**His last observations and pathology results were included in his referral letter.**

**BP = 137/88**

**Weight = 100kg**

**HbA1c (NGSP)= 9.2%, HbA1c (IFCC) = 77mmol/mol measured in the past month**

**eGFR = 70 mL/min**

Question 1: In terms of his diabetes, would you be happy to go ahead with surgery? Why/Why not? What are the recommended targets for glycaemic control in patients having elective surgery?

**His orthopaedic surgeon places him on the waiting list for surgery in 6- 12 months and advises him to see his GP for optimisation of his diabetes prior to surgery.**

**Mr DM improves his diet and his GP adjusts his diabetes regimen to the following: metformin 2g XR nocte, gliclazide 120mg mane and empagliflozin 25mg mane. His HbA1c is now 7% (53mmol/mol) and you are seeing him in the pre-admission clinic a week before his right TKR.**

Question 2: What would you tell Mr DM to do with his diabetes medications in the lead up to surgery and why?

Question 3: As the preadmission clinic pharmacist, what recommendations would you give Mr DM if his GP had started Novorapid 10 units three times a day with meals and Optisulin 20 units at bedtime, instead of empagliflozin? Is there any more information about Mr DMs surgery you would like to know?

Question 4: As the preadmission clinic pharmacist, what recommendations would you give Mr DM if his GP had started Novomix 30 units TWICE daily?

Question 5: As the preadmission clinic pharmacist, what recommendations would you give Mr DM if GP had started sitagliptin or exenatide?

**Mr DM’s surgery goes well and he can eat and drink as normal post-operatively. His BGL is 7.5mmol/L on arrival to the ward post-surgery.**

Question 6: The Resident Medical Officer asks you, the surgical ward pharmacist, when he should restart Mr DM’s diabetes medications. (metformin, gliclazide and empagliflozin, Novorapid, Optisulin, Novomix, sitagliptin, exenatide) What would you recommend?

Question 7: If Mr DM had Type-1 Diabetes and was on an insulin pump what would you recommend?

Question 8: If Mr DM was on an insulin-glucose infusion, when/how would we transition back to the patient’s usual insulin?