

Syllabus	
Topic	Day Surgery

A 52 year old man is admitted for a tympanoplasty on the morning of surgery. He is a longstanding type 2 diabetic who has failed to attend the preoperative assessment clinic.

a)

When patients are referred for elective surgery, what is the HbA1c value above which surgery should be postponed to achieve better glycaemic control and what is a suitable time frame to accept the HbA1c result (2 marks)

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b)

List two-further pre-operative tests that this patient will require (2 marks)

- 1)
- 2)

c)

Other than checking his HbA1c, list 3 ways a preoperative assessment clinic might prepare him for day surgery? (3 marks)

- 1)
- 2)
- 3)

d)

The patient's operation is postponed to assess his diabetes. He appropriately returns for his surgery four months later. He is first on the morning list. His normal diabetic medications include; metformin, gliclazide, and dapaglifozin.

Complete the following table regarding the perioperative management of these drugs specific to his surgery (6 marks)

Drugs	Mechanism of Action	Dose on day of surgery (normal/halve/omit)
Metformin		
Gliclazide		
Dapaglifozin		

e)
 What is the recommended intra-operative blood glucose range for the patient, and how frequently should capillary glucose concentration be measured during the procedure? (2 marks)

Recommended blood glucose range:

Frequency of measurement:

f)
 State your pharmacological management (drug, dose and route) for the following intra-operative blood glucose abnormalities in this patient (4 marks)

1) Blood glucose of 15 mmol/L:

2) Blood glucose of 2.3 mmol/L:

g)
 You opted to give the patient dexamethasone intraoperatively. How long should his blood glucose level be monitored after administering dexamethasone? (1 mark)

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Q	Answer	Mark	Guidance
a)	<ul style="list-style-type: none"> • ≥ 69 mmol/mol • Within the last 3 months (1 mark) 	<p>1</p> <p>1</p>	Accept 70mmol/mol or 8.5%
b)	<ul style="list-style-type: none"> • U+E • ECG 	<p>1</p> <p>1</p>	
c)	<ul style="list-style-type: none"> • Allows opportunity for anaesthetic history and examination • Allows time for questions and to alleviate patient stress about anaesthetic or surgery • Allows for assessment and investigation of diabetes-related complications • Provide instructions on alteration of insulin regimen • Provide instructions on preoperative starving times 	<p>1 mark for each (Max. 3)</p>	
d)	<p><u>Metformin</u></p> <ol style="list-style-type: none"> 1. Enhances uptake of glucose in skeletal muscles via glucose transport protein GLUT 4. Can only act in presence of endogenous insulin. 2. Delays gut glucose uptake 3. Increases peripheral insulin sensitivity 4. Inhibits gluconeogenesis <ul style="list-style-type: none"> • Take as normal <p><u>Gliclazide</u></p> <ol style="list-style-type: none"> 1. Promote secretion of insulin from pancreatic islet cells 2. Reduces peripheral insulin resistance <ul style="list-style-type: none"> • Omit <p><u>Dapaglifozin</u></p> <ol style="list-style-type: none"> 1. Sodium-glucose transporter type 2 inhibitor 2. Increases urinary glucose excretion <ul style="list-style-type: none"> • Halve or Omit 	<p>1</p> <p>1</p> <p>1</p> <p>1</p> <p>1</p>	

e)	<ul style="list-style-type: none"> • <u>Target:</u> 6-10mmol/l – up to 12mmol/l if poorly controlled diabetes • Frequency: hourly 	1	
f)	<u>Blood glucose of 15 mmol/L:</u> <ul style="list-style-type: none"> • Insulin 0.1 IU/kg subcutaneously – up to a max of 6U 	2	2 marks for drug, dose inc max dose, and route
	<u>Blood glucose of 2.3 mmol/L:</u> <ul style="list-style-type: none"> • 100ml of 20% Dextrose (20g) intravenously 	2	2 marks for drug, dose, and route
g)	<ul style="list-style-type: none"> • 1 hourly for 4 hours 	1	Accept 4 hours

References:

1) Association of Anaesthetists of Great Britain and Ireland – Perioperative management of the surgical patient with diabetes (2015)

https://anaesthetists.org/Portals/0/PDFs/Guidelines%20PDFs/Guideline_perioperative_management_surgical_patient_diabetes_2015_final.pdf?ver=2018-07-11-163756-413&ver=2018-07-11-163756-413

2) Association of Anaesthetists & British Association of Day Surgery – Guidelines for Day-Case Surgery (2019)

https://anaesthetists.org/Portals/0/Images/Guidelines%20cover%20images/Guideline_day_case_surgery_2019.pdf?ver=2019-05-05-075731-563

3) Association of Anaesthetists of Great Britain and Ireland – Pre-operative assessment and patient preparation. The role of the anaesthetist 2 (2010)

https://anaesthetists.org/Portals/0/PDFs/Guidelines%20PDFs/Guideline_preoperative_assessment_patient_preparation_anaesthetist_2010_final.pdf?ver=2018-07-11-163756-537&ver=2018-07-11-163756-537