

Syllabus	CI_BK_23
Topic	Anaphylaxis

a)
List the four commonest triggers for perioperative anaphylaxis according to The Royal College of Anaesthetist' 6th National Audit Project (NAP6). (4 marks)

- 1)
- 2)
- 3)
- 4)

b)
What is the estimated incidence of perioperative anaphylaxis? (1 mark)

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c)
Ring and Messmer graded the severity of hypersensitivity reactions from grades 1 to 4. List the associated signs / symptoms seen with each grade (4 marks)

Grade 1:

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Grade 2:

.....

Grade 3:

.....

Grade 4:

.....

d)

List 4 treatment strategies used in management of anaphylaxis (4 marks)

- 1)
- 2)
- 3)
- 4)

e)

List 3 patient groups are more likely to have a poor outcome after a perioperative anaphylaxis? (3 marks)

- 1)
- 2)
- 3)

f)

List 4 recommendation from the NAP6 report (4 marks)

- 1)
- 2)
- 3)
- 4)

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	Answer	Mark	Guidance
a)	<ul style="list-style-type: none"> • Antibiotics • Chlorhexidine • Muscle relaxants • Patent blue dye (breast surgery) 	1 mark for each (Max. 4 marks)	Accept examples of antibiotics or muscle relaxants (no more than 1 each)
b)	<ul style="list-style-type: none"> • 1:10 000 anaesthetics 	1	Accept 1:10 000 – 1:12 0000
c)	<ul style="list-style-type: none"> • <u>Grade I</u>: Mucocutaneous signs • <u>Grade II</u>: Moderate multivisceral signs (hypotension, tachycardia, bronchospasm, gastrointestinal symptoms) • <u>Grade III</u>: Life threatening multivisceral signs (hypotension, tachy or bradycardia with or without arrhythmias, severe bronchospasm) • <u>Grade IV</u>: Cardiac arrest 	1 1 1 1	Accept rash/erythaema/urticaria
d)	<ul style="list-style-type: none"> • Stop trigger • IV fluids 20ml/kg bolus • Adrenaline 50-100µg bolus followed by maintenance infusion if required • Airway support with 100% O2 	1 1 1 1	
e)	<ul style="list-style-type: none"> • Increased age • Increased ASA grade • Morbid obesity • Coronary artery disease • Patients on beta blockers and or ACEi 	1 mark for each (Max. 3 marks)	
f)	<ul style="list-style-type: none"> • Anaesthesia anaphylaxis Treatment and investigation Pack should be available within each department • IV fluids 20ml/kg bolus crystalloid should be administered for hypotension and repeated if necessary • For refractory hypotension: consider use of vasopressin 2 units IV and administration of glucagon 1mg IV for beta blocked patients • Patient with documented allergy to beta-lactam antibiotics + at least 1 other class of antibiotics should undergo allergy testing prior to elective surgery 	1 mark for each (Max. 4 marks)	

<ul style="list-style-type: none">• Antibiotics should be administered as early as possible, preferably at least 5-10 minutes prior to induction of anaesthesia (90% occur within 10min)• Each anaesthetic department should have a dedicated lead clinician for perio-operative anaphylaxis• Report all cases to MHRA, the department lead for anaphylaxis and via the trust clinical incident reporting system, each case should be reviewed at M&M• All anaesthetist should be trained in the management of peri-operative anaphylaxis		
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References

1) Dewachter P, Savic L. Perioperative anaphylaxis: pathophysiology, clinical presentation and management. BJA Education (2019) 19(10)313-320 [https://bjaed.org/article/S2058-5349\(19\)30110-6/fulltext](https://bjaed.org/article/S2058-5349(19)30110-6/fulltext)

2) Harper NJN, Cook TM, Garcez T, Farmer L, Floss K, Marinho S *et al.* Anaesthesia, surgery, and life-threatening allergic reactions: epidemiology and clinical features of perioperative anaphylaxis in the 6th National Audit Project (NAP6). BJA (2018) 121(1)159-171 [https://bjanaesthesia.org/article/S0007-0912\(18\)30318-0/fulltext](https://bjanaesthesia.org/article/S0007-0912(18)30318-0/fulltext)