

Syllabus	NA_IK_09, OR_IK_02, PB_IK_26, PC_IK_04, NA_IK_07
Topic	Prone positioning and spinal surgery

Anthony, a 27 year-old scaffolder, has fallen from a two-storey height. He has sustained a number of cervical spine fractures. He has no other injuries. An antero-posterior cervical fixation is planned with spinal cord monitoring.

a)

Name two types of spinal cord monitoring? (2 marks)

1.
2.

b)

List 2 ways anaesthesia can affect spinal cord monitoring? (2 marks)

1.
2.

c)

What is the name of this device used to support patient's in the prone position? (1 mark)



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d)

List four other options for body support of the patient in the prone position (4 marks)

1.
2.
3.
4.

e)
Anthony is successfully placed in the prone position. Which nerve in the upper limb (coloured red) is at risk of pressure-related injury? (1 mark)



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f)
Name 3 causes of oculopathy associated with prone positioning (3 marks)

1.
2.
3.

g)
List 4 risk factors commonly associated with airway compromise following anterior cervical spine surgery? (4 marks)

1.
2.
3.
4.

The following day you review Anthony on the ward. You notice some swelling around his neck, he is short of breath and his voice sounds different.

h)

What is your concern? And what is your immediate management of this situation (3 marks)

Concern:

Immediate management:

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Q	Answer	Mark	Guidance
a)	<ul style="list-style-type: none"> Somatosensory Evoked Potentials Motor Evoked Potentials 	1 1	<i>Accept SSEPs + MEPS</i>
b)	<ul style="list-style-type: none"> Volatile agents reduce amplitude of SSEPs +MEPS N2O reduces amplitude of SSEPs + MEPS NMBD make MEPS useless 	Any 2	
c)	<ul style="list-style-type: none"> Montreal Mattress 	1	
d)	<ul style="list-style-type: none"> Pillows Chest/pelvic bolsters Allen/Jackson table Wilson Frame Knee-chest position 	Any 4	
e)	<ul style="list-style-type: none"> Ulnar nerve 	1	
f)	<ul style="list-style-type: none"> Corneal abrasion Ischaemic optic neuropathy Central Retinal Artery Occlusion 	3	<i>Accept Central Retinal Artery Thrombosis</i>
g)	<ul style="list-style-type: none"> Multiple level surgery Blood loss >300ml Duration >5hrs Combined anterior and posterior ops Previous cervical surgery 	Any 4	
h)	<p><u>Concern:</u></p> <ul style="list-style-type: none"> Airway compromise <p><u>Immediate management:</u></p> <ul style="list-style-type: none"> 15L/min O2 via trauma mask Request urgent surgical review 	1 for diagnosis 2 for immediate plan	<i>Trauma mask or similar Consider CPAP</i>

References:

- 1) Feix B, Sturgess J. Anaesthesia in the prone position. CEACCP (2014) 14(6)291-297
<https://academic.oup.com/bjaed/article/14/6/291/247907>
- 2) Nowicki RWA. Anaesthesia for major spinal surgery. CEACCP (2014) 14(4)147–152
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