

Syllabus	
Topic	Tracheostomy (2)

You have been fast bleeped to ITU, to attend a ventilated patient who has become acutely hypoxic. He has a percutaneous tracheostomy in place. His saturation is 81%, he's tachycardic and hypotensive. The nurse informs you the tracheostomy was placed earlier today.

a)
List 3 possible non-equipment related causes of this patient's hypoxia (3 marks)

- 1)
- 2)
- 3)

b)
List 3 benefits of a tracheostomy in the ITU setting? (3 marks)

- 1)
- 2)
- 3)

c)
List 2 absolute and 4 relative contraindications to percutaneous tracheostomy? (6 marks)

Absolute contraindications:

- 1)
- 2)

Relative contraindications:

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

d)

List 4 anatomical indicators of potentially difficult percutaneous tracheostomy placement?
(4 marks)

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

e)

Apart from displacement and blockage, list 4 possible late complications of percutaneous tracheostomy (4 marks)

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

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	Answer	Marks	Guidance
a)	<ul style="list-style-type: none"> • Atelectasis, inadequate ventilation due to overly rapid weaning • Surgical emphysema • Pneumothorax • Aspiration • Haemothorax • Pneumomediastinum • Haemomediastinum 	1 mark for each (Max. 3 marks)	
b)	<ul style="list-style-type: none"> • Long term ventilation or long respiratory wean • To allow sedation to be stopped • To facilitate communication • To reduce dead space • To facilitate tracheal suctioning • For airway protection in a patient with poor airway reflexes 	1 mark for each (Max. 3 marks)	
c)	<p><u>Absolute:</u></p> <ul style="list-style-type: none"> • Unstable cervical spine • Severe local infection of the anterior neck • Uncontrollable coagulopathy <p><u>Relative:</u></p> <ul style="list-style-type: none"> • High PEEP • High F_iO₂ • Difficult anatomy • Haemodynamic instability • Previous neck radiotherapy 	1 mark for each (Max. 2)	
d)	<ul style="list-style-type: none"> • Overlying scar tissue • Previous neck radiotherapy • Overlying blood vessels • Thyroid goitre • Tracheal deviation • Obesity • Fixed flexion of the neck • Unstable cervical spine • Burns • Difficult to identify surface anatomy 	1 mark for each (Max. 4 marks)	

e)	<ul style="list-style-type: none"> • Minor and major bleeding • Local infection • Tracheal stenosis (at stoma site more often than cuff) • Persisten stoma • Dysphagia • Disfiguring scar • Tracheomalacia • Voice changes • Death 	1 mark for each (Max. 4 marks)	
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References

- 1) National tracheostomy safety project. Tracheostomy emergency algorithm.
<https://www.youtube.com/watch?v=Qu7M-LPAufI>
- 2) Batuwitage B, Webber S, Glossop A. Percutaneous tracheostomy. CEACCP (2014) 14(6)268-272 <https://academic.oup.com/bjaed/article/14/6/268/247676>
- 3) Hunt K, McGowan S. Tracheostomy management. BJA Education (2015) 15(3)149-153
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