Q18

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Overview

- Core topic
- Common case
- Common ‘procedure’
- “What matters is not how many times you have performed uncomplicated procedures, it’s your preparedness to recognise and manage complications”
    - Weingart ...I think.
- Credit to Life In The Fast Lane’s NIV discussion

Pass marks

- Arbitrary ‘borderline’ mark was set at 15 (60%)
- A few tripped at “stop the NIV” and got 0 for part (e) – losing potential 4/25 marks
- Many didn’t fill all answers - a mistake unless you are doing very well on other questions. A few were also “wordy” - wasting time
- Remember the exam is just a point-collecting exercise
  - No-one cares what you got for individual questions
  - Question “pass marks” are just used to guide the overall exam “pass mark”

Question a)

- Indications for NIV
- Variations on 4 of
  - Resistant hypoxia/Type I resp failure
  - Hypercapnea/Type II resp failure
  - APO
  - Respiratory fatigue/increased Work of Breathing
  - Splinting ribs/flail
  - Pre-oxygenate/bridge to ETT
  - NOT ARDS nor pneumonia without one of the above.
  - NOT *Inclusion* criteria – alert, aware, cooperative

- Contra-indications
- Choose from 4 of:
- Decreased GCS esp if unprotected airway
- Severe facial trauma/deformity
- Intolerant/refuses
- Vomiting
- Lack of staff/monitoring
- Apnoea/peri-arrest
- “advanced care directive declining NIV?!”

Question b)

- BiPap
  - Some people stated CPAP – then gave BiPap justification and BiPap question c) answers
- Physiological justification of improved CO2 clearance/type II faiiure

Question c)

- BiPap settings
  - FiO2 either start low and why with SatO2 goals
    - Also accepted start high – but only if justifed by weaning plan (and goals)
  - EPAP/PEEP – start low, improves 02
  - IPAP/pressure support -low-ish improves ventilation/CO2 clearance, beware too high
  -
  - NOT ventilator settings, flow rate, I:E ratios etc...

Part d)

- Diagnosis – only worth 1 point out of 25!
- Needed “tension pneumothorax”
- I thought the image and the vital signs made it fairly clear.

Part e) – the tripping point

- Stop NIV!
  - Replace with 100% non-rebreather
  -
- No Stop is “fatal error”
  - 0 points for part e

Once NIV stopped

- Thoracostomy
  - Some included needle most did finger
- Intercostal catheter
- Analgesia
- Fluids
- Explain/reassure
- Some said review ?NIV recommence

- To ETT “immediately” or not
  - Some said bilat chest tubes and intubate
  - My case of 1 I did not have to intubate
  - It is just another type of high positive pressure ventilation – and probably MORE risky
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- In the end I paid “prepare for ETT” as suggesting preparation and reassessment, but not “immediate intubation”

Part f)

- Your chance to show the breadth of complications you are watching for
- I did not want/expect 4 variations of barotrauma
  - Pneumomediastinum, pneumopericardium, subcut emphysema, pneumocephalus
- I asked for *other complications* beyond tension pneumothorax
  - In the end I paid 2 , but not 3

Part f) so many complications beyond barotrauma

- Claustrophobia/ agitation/ refusal
- pressure ulcers/ necrosis (nasal bridge)
- facial or ocular abrasions
- claustrophobia/anxiety
- Agitation
- hypotension if hypovolaemic
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- air swallowing with gastric/ abdominal distension, potentially leading to vomiting and aspiration
- oronasal mucosal dryness
- raised ICP
- increased intraocular pressure
- impaired communication