

NIV

A 67 yr old woman is brought by ambulance to your department with acute shortness of breath. She is known to have COPD, and she has been gradually worsening over the past 3 days. She is on 100% oxygen. Her O₂ saturations are 99%. One of the junior doctors has taken her ABG's which are as follows

pH 7.13
pO₂ 15.7
pCO₂ 10.3
BE -2.0

What would be your first action? 1 mark

Reduce Oxygen from 100%

What parameters would you tell the nurses for her monitoring? 1 marks

Maintain sats low 90's %

What would be your initial treatment? 3 marks

Steroids

Nebulised B-agonists

Nebulised ipratropium- not mentioned in NIVCE but fair dincum I think

Theophylline should only be administered if failure of the above- NICE

Antibiotics only if H/O purulent sputum- NICE

An hour later her ABG are as follows

pH 7.10
pO₂ 8.5
pCO₂ 10.9
BE -2.5

What are the indications for NIV (BiPAP)? 2 marks

*Acute exacerbation of COPD with resp acidosis pH <7.35 (this gets you 2marks)
also*

Hypercapnic resp failure secondary to neuromuscular or chest wall deformities

Decompensated obstructive sleep apnoea

What are the contraindications for NIV? 3 marks

Recent facial/upper airway surgery

Pt vomiting

Fixed upper airway obstruction

*Copious resp secretions, inability to protect airway, life threatening hypoxaemia,
severe co-morbidity, confusion/agitation, bowel obstruction.*

Pneumothorax without drain.

Thorax 2002;57:192-211 NIV in acute respiratory failure