ROYAL COLLEGE of PHYSICIANS of EDINBURGH

Evening Medical Update: Respiratory Medicine December 2022

Obstructive sleep apnoea – who needs priority referral? - Dr Sophie West, Consultant in Respiratory Medicine & Lead of Newcastle Regional Sleep Service, Freeman Hospital, Newcastle Upon Tyne

My question is regarding the decision to go for conservative weight loss management vs palatoglossopharyngoplasty (otorhinolaryngology/surgical referral) and the implications of comorbidities on the plan of management?

Not very effective unless single issue eg large tonsils. Weight loss very effective for OSA, BP, DM etc - much better option.

Patient with OSA and central sleep apnoea overlap, does evidence suggest CPAP cause more harms?

No (CANPAP study),. Data for harm is for Adaptive servoventilation in SERVE-HF study if severe LV dysfunction.

How do we objectively define excessive sleepiness?

Can do maintenance of wakefulness test but mainly a research tool.

Is palatoplasty recommended for patients with OSA?

No - no benefit.

Is severe OSA reportable to DVLA? From my understanding, in Canada, there is a duty to report.

Yes if associated with excessive sleepiness having or likely to have adverse impact on driving. DVLA fitness to drive guidelines and last few slides of my presentation.

Is there an association between post-COVID syndrome/long fatigue syndrome with OSA

Yes many patients with long covid turn out to have OSA. NO causative association.

Is the Mallampati scale/score incorporated in assessing for OSA?

Yes - small pharynx/Mallampati 4 much more likely to have OSA.

COPD: when to ventilate? - Professor Stephen Bourke, Honorary Professor of Respiratory Medicine, Northumbria Healthcare NHS Foundation Trust

What should be the strategy for management in COPD exacerbation patients with maximum ceiling of care as NIV, however low GCS due to CO2 narcosis and respiratory acidosis?

When NIV is the ceiling of care, the answer is particularly straightforward – manage with NIV, keeping the patient propped up. Consider placing an NG tube.

Even when the patient is considered appropriate for escalation to intubation, a similar approach can be considered, although critical care should be involved. GCS should to improve as the $PaCO_2$ falls. In patients who show a rapid improvement on NIV, the short period of increased risk with an unprotected airway due to low GCS may be offset by the advantages of avoiding intubation. The actual GCS at presentation and rate of improvement (particularly over the first hour on NIV), alongside other clinical factors including whether single or multiple organ support may be required will influence the decision to intubate.

See Diaz et al. Noninvasive Positive-Pressure Ventilation To Treat Hypercapnic Coma Secondary to Respiratory Failure. CHEST 2005; 127:952–960

What would be the NIV contraindications in stable Hypercapnia over long SABA/LABA therapy?

I am uncertain about the reference to SABA/LABA therapy. All patients being considered for home NIV should also be on optimal COPD management – pharmacological and nonpharmacological therapy, and including LAMA + LABA (+ICS provided stable state blood eosinophils are ≥ 0.1).

Some patients are intolerant of NIV despite careful attention to the interface/mask and settings. Facial deformity, and facial burns or trauma preventing adequate mask seal are uncommon. Some transient conditions would preclude initiation of NIV, but by definition such patients are not stable – e.g. undrained pneumothorax, recent oesophageal or gastric surgery, ileus. Severe tracheal stenosis is also a contra-indication. Severe bulbar impairment / unprotected airway is a relative contra-indication – such patients also tolerate NIV poorly.

An RCT in stable symptomatic patients with preserved exercise tolerance and $PaCO_2$ > 7kPa showed a substantial survival advantage. The trial has been criticised in terms of selection and generalisability. Köhnlein Lancet Respir Med 2014;2:698-705.

Home NIV should be considered in patients who survive an exacerbation requiring acute NIV, and with $PaCO_2$ > 7kPa after 2 weeks into the recovery phase. The period immediately after discharge carries the highest risk and delays should be avoided. See: Murphy et al. JAMA 2017;317:2177-86. The population in HOT HMV was much more representative of the COPD patients we usually treat.

Pneumothorax – acute management update - Dr Andrew Stanton, Consultant in Respiratory Medicine, Freeman Hospital, Newcastle upon Tyne

How does one decide the management workup of traumatic vs non-traumatic pneumothorax with due respect to differences in the ACLS and ATLS algorithms?

I'm sorry I'm not familiar with the trauma guidelines so can't really comment on traumatic pneumothorax management.

Would the ambulatory strategy be same for patients with associated bullous disease or alpha-1-antitrypsin disease?

Pneumothoraces in this group will be secondary pneumothoraces and so intervention using a rocket device for example would not be recommended as per findings of the HiSPEC trial. There is an open question about the true benefit the ambulatory strategy using pneumostat device on to chest drain in these patients as the high spec trial was ultimately under powered. Certainly the high spec trial suggested there may be some benefit in selected patients but a formal trial of ambulation using chest drain with subsequent new pneumostat device in secondary pneumothoraces is warranted

A secondary spontaneous pneumothorax (bullous disease), air leak goes on and on... What do you do?

This is a difficult area. If thoracic surgeons feel that there is no surgical option then the options generally rest with waiting with chest drain in-situ and considering ambulation if that is an option and sometimes these patients need a drain in for a number of weeks before things ultimately resolve. Other interventions to consider would be endobronchial valve therapy or blood patch pleurodesis from case series data

Is there any role for high flow oxygen in small primary pneumothoraces?

Absolutely not, not indicated, these patients should not be needing any interventions and can generally safely be observed by clinic follow-up

What is the management of subcutaneous emphysema post ambulatory care of primary spontaneous pneumothorax?

Small amounts of subcutaneous emphysema should resolve spontaneously. If subcutaneous emphysema progresses then there is a suggestion that your ambulatory valve is not keeping up with the air leak and so that is 1 situation where a larger drain may be considered depending on the overall clinical situation of the patient

Can we perform chest drain insertions with patients lying on their front?
In some circumstances this may be required for example if you have a complex secondary pneumothorax with lung tethering and lying the patient on the front is the only way to know you have a safe window for drain insertion but that usually would only be identified after CT scanning.

To what extent do these research findings impact your management of a Hydropneumothorax?
Significant hydropneumothoraces were not included in these recent studies so I do not think this data really has an influence on management of that problem

Does the size of the pneumothorax affect the mngt options?

Generally not, I would generally be using symptoms to guide my decision for intervention unless there was a particular reason the patient needed faster resolution for example travel or occupational reasons