10 MINUTE GUIDE TO RESPIRATORY *Medicine*

NHS
The Dudley Group
NHS Foundation Trust

Dyspnoea & Tachycardia

Not Hypoxic
? Stress.
ABG: normal PaO2 & Low $PaCO_2$

Hypoxic

CXR NOT sig. Abnormal.

Asthma: (wheeze++) & Hx

COPD: (some wheeze) & Hx

PE: (Usually N. CXR: unexplained hypoxia; Wells criteria / DDImers / CTPA)

CXR Abnormal

Diffuse abnormality:

CCF (Pro BNP & ECHO)

ARDS (Shock lung: sepsis/viral/severe trauma)

Pre existing ILD: (Hx. & vasculitis screen)

Focal Abnormality

More Bibasal CXR Abn:

Bact Pneu.: PCT up

Covid Pneu.: PCT normal

B'ectesis

Multiple mets /nodules/ balls

Bilat. Pleural effusions (CCF w big heart) (Cirrhosis)/(Nephrotic)

More Unilateral CXR Abn.

Pneumonia.

Pulmoary abscess (Cavity)

Cancer (?Cavity inc. Lymph.)

Unilateral Pl Effusion (Indolent: cancer/ Toxic: infective).

Asthma:

Steroids (30mg / day 1/52) Nebs. (Ipramol 1 udv neb. qds) Perhaps antibiotics if CRP > 40 or purulent cough (Doxy 200mg stat & 100mg/day for 1/52; check for allergies)

COPD:

Steroids, Nebs, and usually Doxy as above (Bacterial bronchitis common). Consider pneumonia antibiotics depending on CXR, CRP, PCT. If sats < 88% will need at least one ABG to exclude T2RF.

Most have **T1RF**, and O2 to keep sats aprox. 93% (or greater) will be OK.
(Type 1 respiratory failure involves **hypoxaemia** (PaO2 <8 kPa) with **normocapnia** (PaCO2 <6.0 kPa). PH & Bicarb are normal.)
Some have **compensated T2RF** and O2 to keep sats 88-92%, is the aim. High FiO2 (Fraction of inspired Oxygen) keeping sats above 92% can result in respiratory acidosis.
(Type 2 respiratory failure involves **hypoxaemia** (PaO2 <8 kPa) with **hypercapnia** (PaCO2 >6.0 kPa) with **Normal**: pH 7.35 – 7.45 Usually Bicarbonate > 26mMol/L)
T2RF with acidosis requires assessment for NIV or formal Ventilation, with an escalation decision.
(Type 2 respiratory failure **with acidosis** involves **hypoxaemia** (PaO2 <8 kPa) with **hypercapnia** (PaCO2 >6.0 kPa) with **Abnormal: pH <7.35** , and Usually Bicarbonate >>26mMol/L
COPD as a group: lots of co-morbidities; check usual meds on blue tab on sunrise, could be V. important.

Pneumonia:

BTS Risk score: CURB65 (>30RR / <60DBP / <90SBP)
Procalcitonin up with bacterial. Tx. & antibiotics as per Hosp. Guidelines and BTS score:

SCORE	RISK	DISPOSITION
0 or 1	1.5% mortality	Outpatient Care
2	9.2% mortality	Inpatient vs. careful observation as OP
>3	22% mortality	Inpatient admission with consideration for ICU admission with score of 4 or 5

≥3 Implies escalation decision especially with co-morbidity.
Cavitating pneumonia: cavity with air fluid level on CXR; may need long term IV antibiotics.
(See emepyema below)

PE:

Wells ≤ 4 = DDdimers, if Negative PE v. unlikely. Pos. DDimers = Anticoag & CTPA or VQ, but see below.
Wells > 4 = Tx dose Daltaparin & CTPA. Note: if SPESI score is 0, can have once daily Daltaparin and OP CTPA. (No need to admit) If CXR is normal, and no Hx. of asthma or COPD a VQ scan is as sensitive as CTPA (depending on resources) If going for OP Tx., need to make sure Pt. can get Daltaparin, and Radiology will recall for definitive test.

Empyema:

Pus between visceral and pariatal pleura. Pleural pH <7.2 on ABG testing of pleural fluid. Green needle aspirate of effusion at point of maximum dullness on percussion. (Suck up specimen into ABG syringe through an orange needle: this size filtering will stop purulent stuff from blocking ABG machine). IV antibiotics as per Hosp guidelines, and pleural drainage (Chest drain). Need to continue IV antibiotics until CRP is ≤ 40 for 48Hrs (Can take weeks).