

COPD: Therapeutic Update

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Disclosures

- In the last 5 years Dr King's research group has received:
 - Consultancy fees for talks, chairmanship, advisory boards, sponsorship for conferences from:
 - AstraZeneca, Boehringer Ingelheim, GlaxoSmithKline, Menarini, MundiPharma, Novartis and Teva Pharma
 - Unrestricted research grants
 - NHMRC
 - Pharmaceutical Industry
 - Boehringer Ingelheim, GlaxoSmithKline, Menarini, MundiPharma
 - Philanthropic societies
 - Sydney University

Summary – there are no major 'breakthroughs'

- Diagnosis and case finding
- Characterising a heterogeneous disease
 - Identify therapeutic goals
- Inhaled therapy: 'Less is more'
- Macrolides, theophylline, oral steroids



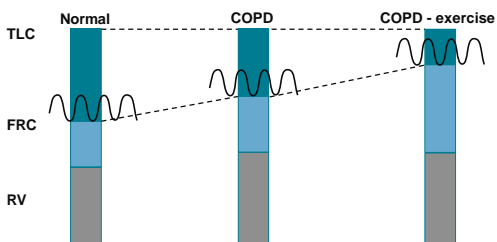
Diagnosis

- An inhalational insult (smoking, environmental)
- Airflow obstruction by spirometry
- \pm symptoms
 - cough, sputum, SOB, wheeze

		Pred	Pred LL	Pred UL	Result	%Pred	Z-Score	Post...	% Pred	%change
FEV1	L	2.35	1.71	2.96	1.81	77	-1.38	1.96	83	8
FVC	L	3.04	2.22	3.91	3.59	118	1.04	3.47	114	-3
FEV1 % FVC	%	77.90	64.67	89.27	50.83	65	-3.07	56.32	72	12
PEF	L/s	6.02	4.54	7.50	5.48	91	-0.61	6.39	89	-2
FVC IN	L	2.86	2.17	3.55	3.22	113	0.85	3.00	105	-7

Age: 69 Years Gender: female
Race: Caucasian Weight: 69.5 kg
Height: 167.20 cm BMI: 22

Hyperinflation (dynamic)



Importance of the clinical history

- CRITICAL to the diagnosis
- Are symptoms attributable to
 - airflow obstruction?
 - or to chronic bronchitis?
 - potentially other?

Case finding: yes or no?

- Yes
 - early intervention (lifestyle)
 - exacerbation versus simple chest infection
 - request spirometry on
 - all current smokers
 - past smokers >15-20 pack-years smoking
- No
 - normal spirometry might 'reinforce' smoking?
 - Cannot alter natural history in ex-smokers



Characterising a heterogeneous disease



Identify therapeutic goals

- Tailor treatment
- Addressing comorbidities improves QoL
 - cardiac disease
 - mood
 - obesity
 - OSA
 - deconditioning



The importance of exercise therapy

- Improves QoL
 - mood
 - exercise capacity
 - reduced SOB
- reduced exacerbations
- Increased mucus clearance



Goals of inhaled therapy?

- Improve breathlessness
- Reduce cough and sputum
- Reduce exacerbations/hospitalisation
- Improve exercise
- Improve quality of life
- Increase life expectancy
- Reduce rate of progression



Effects of inhaled therapy?

- Improve breathlessness
- Reduce cough and sputum
- Reduce exacerbations/hospitalisation
- Improve exercise
- Improve quality of life
- Increase life expectancy
- Reduce rate of progression



Drug Classes

- short acting bronchodilators
- long acting bronchodilators
- inhaled corticosteroids



Prescribing strategy

- Do it sequentially
 - Single (either LAMA or LABA)
 - Consider dual
 - Consider triple (i.e. add ICS)
- ICS dose should be low – moderate e.g.
 - BUD 200 – 400 µg bd
 - Fluticasone Furoate 100 µg
 - Fluticasone Propionate 125 – 250 µg bd



ICS withdrawal

- Attempt a trial of withdrawal
 - some will worsen
 - very unlikely to precipitate an exacerbation
 - most will not need ICS
 - blood eos >150-300 x10⁹/L
 - frequent exacerbators
 - poor to moderate predictive ability?



ICS/LABA/LAMA

- Benefit a minority (cf dual BD)
 - improved QoL
 - reduced exacerbations (mild and severe)
 - reduced mortality



Macrolides

- Azithromycin 250 mg 3x/week
 - Albert azithromycin study was 250 mg daily
 - some hearing in some
 - improved QoL
 - reduced exacerbations
- Clarithromycin 250 mg 3x/week
- Reduced exacerbations



Theophylline

- Anti-inflammatory
- 'restores' steroid responsiveness
- low dose e.g. 250 1 or ½ daily
- beneficial in some
- many drug interactions



Hypotheticals - Case 2

- 65 yrs male
- Ex-smoker 40 pack-years
- Slim
- Cough + sputum
- Diagnosed COPD 5 years
- Yearly RTI & acute SOB, antibiotics and prednisone
- Regular walks
- Fluticasone/salmeterol DPI 500/50



Hypotheticals - Case 2

- Aims of treatment?
- Assessment of effectiveness?



Hypotheticals - Case 2

- Does he need a change in Rx?
- Should you reduce Rx?
- Should you increase Rx?
- Should you stop Rx?



Hypotheticals - Case 2

- FEV1 60% of predicted
- Does this alter your treatment decisions?



Hypotheticals - Case 3

- 69yr woman
- Ex-smoker 40 pack-years
- Slim
- Cough + sputum
- Diagnosed COPD 10 years
- Twice yearly RTI & no acute SOB, Rx antibiotics only
- Regular walks but doesn't walk quickly 2° SOB
- SABA PRN
- FEV1 45% of predicted



Summary - home

- Even early COPD is worth diagnosing
- Use spirometry + careful history
- Identify treatable traits (usually many)
- Less inhaled therapy
- More physical therapy

