



Dr Colin Wong

Clinical Leader of Respiratory Services
Dunedin Hospital

Refractory Asthma - Concurrent Workshop Repeated

Saturday, 17 August 2013

Start 2:00pm

Start 3:05pm

Duration: 55mins

Duration: 55mins

Lounge 2

Lounge 2



South GP CME 2013

General Practice Conference & Medical Exhibition

15-18 August | Edgar Centre | Dunedin

REFRACTORY ASTHMA

Workshop Session

South GP CME 2013

CASE 1

Miss CW 24 year old

Longstanding severe asthma

- previously seen regularly in Chest Clinic
- lifestyle and social issues

Exercises regularly but limited tolerance

- needing bronchodilator frequently

Respigen, Seretide 4 puffs QID, multiple courses
prednisone

Smoker – 30G tobacco per week

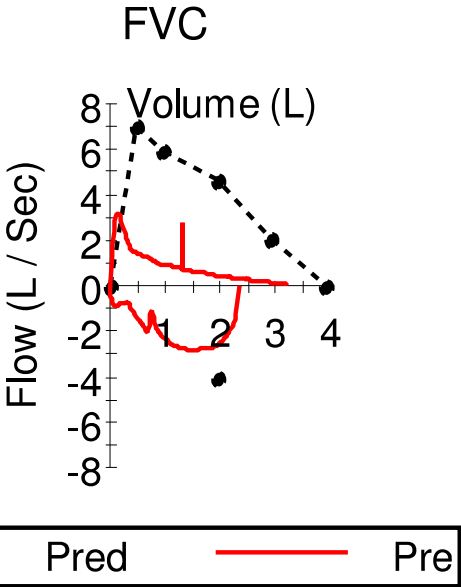
Unemployed, on methadone programme

Pre-Bronchodilator

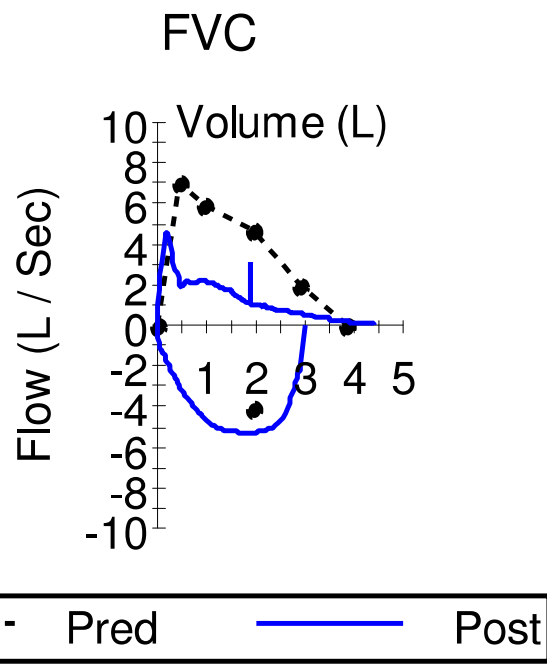
	<u>Pred</u>	<u>Actual</u>	<u>%Pred</u>	<u>LLN</u>
----- Spirometry -----				
FVC (L)	3.90	*3.20	*81	3.22
FEV1 (L)	3.33	*1.32	*39	2.65
FEV1/FVC (%)	86	41	48	
FEV1/SVC (%)	85	35	41	
FEF 25-75% (L/sec)	4.1	*0.5	*12	2.8
PEF (L/min)		189.2		

--- Exhaled Nitric Oxide ---

FeNO (ppb)	Adult<25; Child<20	1
------------	--------------------	---



	Pre-Bronchodilator				Post-Bronchodilator		
	<u>Pred</u>	<u>Actual</u>	<u>% Pred</u>	<u>LLN</u>	<u>Actual</u>	<u>% Chng</u>	<u>% Pred</u>
---- Spirometry ----							
FVC (L)	3.85			3.17	4.41		114
FEV1 (L)	3.29			2.61	*1.93		*58
FEV1/FVC (%)	86				44		51
FEV1/SVC (%)	85						
FEF 25-75% (L/sec)	4.1			2.8			
PEF (L/min)					267.2		



CASE 2

Mr PT 25 year old mechanic

Asthma since childhood

Recurrent exacerbations requiring repeated courses
oral prednisone in community

Using Ventolin regularly

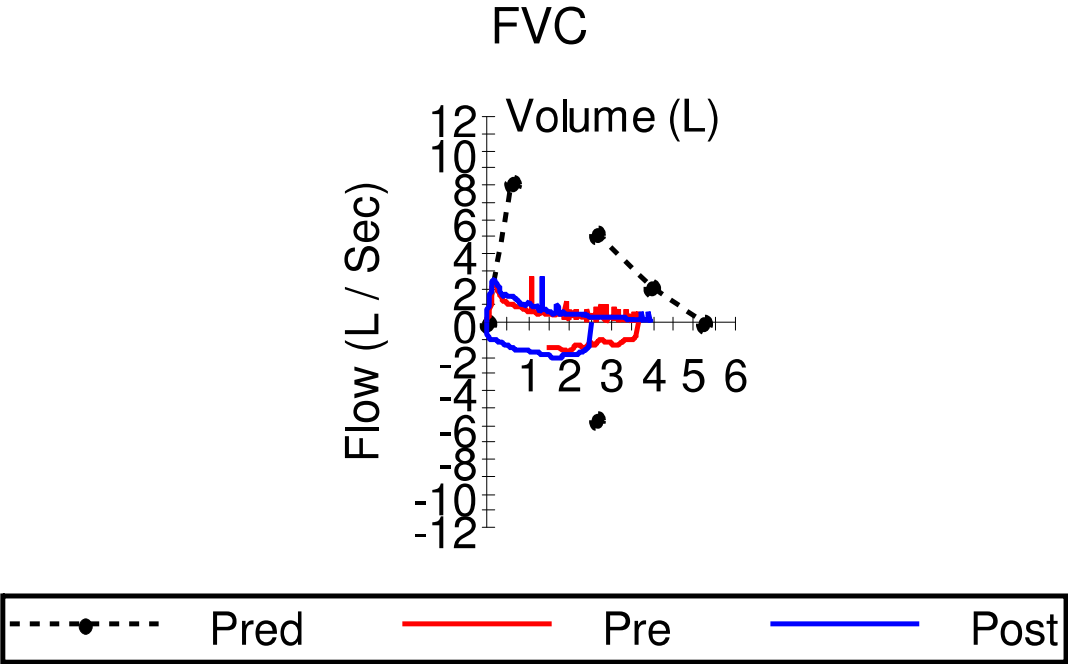
Ventolin, Symbicort, Nuelin SR, nasal sprays

Recurrent sinusitis, requiring ENT review

----- Spirometry -----

FVC (L)
FEV1 (L)
FEV1/FVC (%)
FEV1/SVC (%)
FEF 25-75% (L/sec)
PEF (L/min)

Pre-Bronchodilator				Post-Bronchodilator		
<u>Pred</u>	<u>Actual</u>	<u>% Pred</u>	<u>LLN</u>	<u>Actual</u>	<u>% Chng</u>	<u>% Pred</u>
5.24	*3.66	*69	4.19	*3.98	+8	*75
4.39	*1.08	*24	3.53	*1.30	+20	*29
84	30	35		33	+11	39
84						
4.7	*0.3	*7	2.9	*0.5	+43	*10
	152.0			144.8	-4	



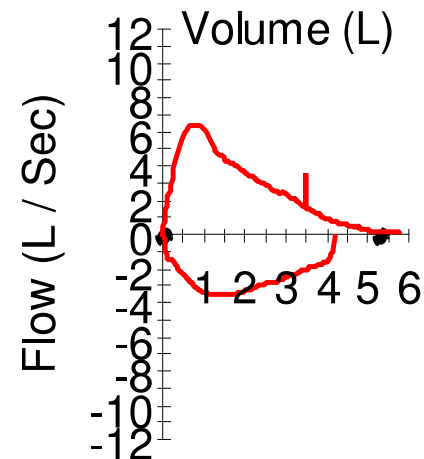
Pre-Bronchodilator

Pred Actual %Pred LLN

---- Spirometry ----

FVC (L)	5.27	5.78	109	
FEV1 (L)	4.37	3.50	80	
FEV1/FVC (%)	83	61	73	
FEV1/SVC (%)	83			
FEF 25-75% (L/sec)	4.6	*1.8	*38	3.0
PEF (L/min)		398.6		

FVC



----●---- Pred ——— Pre

CASE 3

Mr SA 52 year old Pakistani

Known severe asthma

- long term prednisone
- multiple hospital presentations, regular attender to Emergency Dept

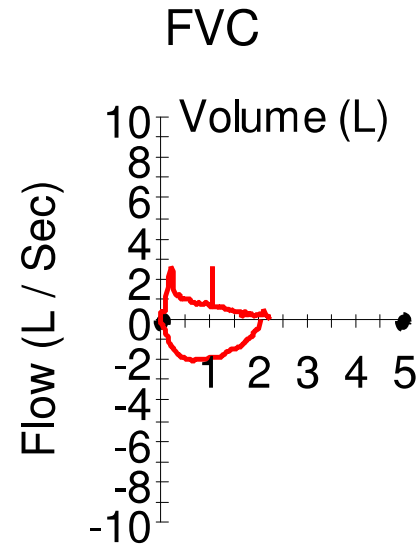
Ventolin inhaler (one per week), Duolin nebules (6-7 times daily), Symbicort 2 puffs QID, Atrovent Forte, maintenance prednisone 10mg, calcitriol

Never smoked

Invalids beneficiary

Pre-Bronchodilator

	<u>Pred</u>	<u>Actual</u>	<u>% Pred</u>	<u>LLN</u>
----- Spirometry -----				
FVC (L)	4.93	*2.23	*45	3.97
FEV1 (L)	3.92	*1.05	*26	3.10
FEV1/FVC (%)	80	47	58	
FEV1/SVC (%)	80	39	49	
FEF 25-75% (L/sec)	3.8	*0.6	*14	2.2
PEF (L/min)		150.5		



-----●-----	Pred	—————	Pre
-------------	------	-------	-----

CASE 4

Mrs NC 74 year old Asian woman

Progressive Alzheimers dementia

- recently moved into rest home care
- experienced more frequent asthma attacks, requiring brief hospital admissions
- presenting again with increasing dyspnoea & wheeze
- also noted to have developed purpuric rash over trunk

Respigen, Seretide 2 puffs bd, Atrovent – all supervised

Also on treatment for hypertension, hyperlipidaemia

Never smoked

Test		Ref.Range	Units
Haemoglobin	157 H	115 - 155	g/L
HCT	0.46	0.35 - 0.46	
MCV	86	81 - 98	fL
MCH	29.4	27.0 - 33.0	pg
Platelets	321	150 - 430	x 10 ⁹ /L
WBC	23.7 H	4.0 - 11.0	x 10 ⁹ /L
Neutrophils	8.5 H	1.90 - 7.50	x 10 ⁹ /L
Lymphocytes	6.9 H	0.90 - 4.00	x 10 ⁹ /L
Monocytes	0.7	0.20 - 1.00	x 10 ⁹ /L
Eosinophils	7.5 H	< 0.6	x 10 ⁹ /L
Basophils	0.1	< 0.3	x 10 ⁹ /L

Test		Ref.Range	Units
Sodium	140	135 - 145	mmol/L
Potassium	3.7	3.5 - 5.2	mmol/L
Urea	2.2 L	3.2 - 7.7	mmol/L
Creatinine	73	45 - 90	umol/L
eGFR	70		mL/min/1.73m2
Albumin	43	35 - 50	g/L
Total Protein	80	64 - 83	g/L
Total Bilirubin	12	2 - 20	umol/L
Alk. Phosphatase	112	30 - 150	U/L
ALT	31 H	0 - 30	U/L
GGT	18	10 - 35	U/L
CRP	106 H	< 5	mg/L
HCT	0.46	0.35 - 0.46	
hsTroponin T	215 H	416 H	< 14 ng/L
Serum Globulin	37 H	18 - 36	g/L

CASE 5

Mr RS 54 year old

Onset of troublesome asthma at 43 years

- frequent courses of oral prednisone, now on maintenance oral steroid
- regular & reliable with inhaled therapy
- uses Ventolin sparingly

Previous nasal polypectomy by ENT with good result

Never smoker

IT consultant

Pre-Bronchodilator

	<u>Pred</u>	<u>Actual</u>	<u>%Pred</u>	<u>LLN</u>
---- Spirometry ----				
FVC (L)	4.57	*2.08	*45	3.61
FEV1 (L)	3.61	*1.20	*33	2.79
FEV1/FVC (%)	79	58	72	
FEV1/SVC (%)	79			
FEF 25-75% (L/sec)	3.6	*0.4	*12	2.0
PEF (L/min)		187.3		

FVC

