Refractory Cough: non pharmacological interventions

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The Cougher  (Wendy Cope 2009)

There’s a tickle in my throat
And you’ve hardly heard a note
And you’re wishing you were in some other place
In this silent listening crowd
You’re the one who’ll cough out loud
And you know you’re facing imminent disgrace

Yes, right now you’re in a pickle
And your unmanageable tickle
Is a torment and it’s threatening your poise
Can you hold out any longer
As the urge to cough grows stronger
Any moment you’ll emit a mighty noise

If this bloody piece were shorter
If you had a glass of water
It would help
Oh, if only you could be
At home with a CD
In a armchair free to cough the whole way through

Do you hear a rallentando
Does this mean the end’s at hand
What a mercy! Yes they’re really signing off
They perform the closing bars
And you thank your lucky stars
And its over. You’ve made it. You can cough.”
Outline

- Refractory cough
- Impact of cough
- Speech / Physiotherapy
- Lung cancer cough intervention
Cough

- Most common reason for medical consultation
- Antitussive drug sales >$4bn USA
- 20-40% Respiratory clinic referrals
- Impact on QOL significant
- Important symptom lung cancer, COPD, IPF
Cause

- **Acute**
  - Cold / Flu
  - Pneumonia
  - COPD / Asthma

- **Chronic**
  - Smokers bronchitis
  - Tuberculosis (TB)
  - Bronchiectasis
  - COPD / IPF
  - Cough Hypersensitivity Syndrome
  - Lung cancer
Refactory chronic cough: case study

• 50 year old female
• Cough 12 months, dry, tickle in throat
• Triggers: talking, cold air, perfumes
• Normal CXR / spirometry
• Treatment trials: - omeprazole 40mg twice daily (3 months)
  - Inhaled/oral steroids
  - Nasal steroids/antihistamine
• Investigations - 24 Hr Oesophageal pH
  - Methacholine challenge
• Capsaicin: heightened cough reflex sensitivity
• Diagnosis: “Unexplained, idiopathic, refractory, cough, CHS”
Cough reflex hypersensitivity

Voluntary

Central sensitisation

Peripheral

Airway stimulus

Hegland K, JAP 2012;113;39
Cough Hypersensitivity Syndrome (CHS) ERS Definition

Cough Hypersensitivity Syndrome is a clinical syndrome characterised by troublesome coughing often triggered by low levels of thermal, mechanical, or chemical exposure.

CHS may mimic or co-exist with other pulmonary or extra-pulmonary disease.

ERJ (2015), 44:1132 (task force)
Adverse impact of cough

Physical
- Chest pains
- Sputum
- Tired
- Paints/fumes
- Sleep
- Frequency
- Hoarse Voice
- Energy

Psychological
- Embarrassed
- Anxious
- In control
- Frustrated
- Fed up
- Serious illness
- Other people

Social
- Conversation
- Annoy family
- Job
- Enjoyment

Birring S et al, Thorax 2003; 58:339-343
Depressive symptoms in CHS

Dicpinigaitis P et al, Chest 2006; 130:1839
ELF Survey of cough

- Chronic cough, n=1122
- 14 questions
- 29 Countries
- 10 translations
- Internet: Google Ad
- Key words: chronic cough

Chamberlain S et al, Lung 2015;193:401
IMPACT OF COUGH

Does your cough stop you doing the things you would like to do?

- Never, 22%
- Sometimes, 50%
- Frequently, 28%

Do you feel fed-up or depressed because of your cough?

- Yes, 55%
- Sometimes, 35%
- Never, 10%

Chamberlain S et al, Lung 2015;193:401
TREATMENT

Have the treatments for your cough worked?

- Yes, 8%
- A little, 56%
- No, 37%

Have you found non-prescribed cough suppressant medications effective?

- Yes, 5%
- A little, 30%
- No, 66%

Chamberlain S et al, Lung 2015;193:401
Patient comments: request for support

Would you like more information on chronic cough to be available?
YES 92.3%; NO 9.6%

What further information would you like?

“How to stop the cough”

“How to manage the cough”:
- to ‘suppress’
- reduce exacerbations
- any supportive measures or home remedies
- in fact ANYTHING, which can help control cough

“Possible causes and treatments”

“Herbal, diet and environmental factors: ‘things to avoid’ e.g. types of paint”

“Information for doctors on how to treat (as they don’t seem very aware)”

“How to deal with the domestic environment, and manage the cough at home”

“Advice and education”

“Alternative therapies”
Gabapentin for refractory chronic cough: a randomised, double-blind, placebo-controlled trial

Nicole M Ryan, Surinder S Birring, Peter G Gibson

Summary
Background Refractory chronic cough causes substantial symptoms and quality-of-life impairment. Similar

\[ P = 0.004 \]

![Graph showing the comparison of Gabapentin and Placebo over visits and months with titration and treatment phases.](image)

Lancet 2012; 380: 1583-1589
Treatment of Refractory Cough - Morphine

**p<0.01

MORRICE AH et al; AJRCCM 2007; 175:312-5
Non pharmacological therapy

Cough reduction/control, NOT suppression!

- Conscious control of cough and urge to cough
- Voluntary reduction
- Substitute cough behaviour / Distraction
- OPTIONS
  - Speech / voice therapy
  - Physiotherapy
  - Respiratory Distress Symptom Intervention
  - Meditation
  - Psychogenic cough: Hypnosis, suggestive therapy, counselling
Speech therapy

COUGH

Efficacy of speech pathology management for chronic cough: a randomised placebo controlled trial of treatment efficacy

A E Vertigan, D G Theodoros, P G Gibson, A L Winkworth

Thorax 2006;61:1065–1069. doi: 10.1136/thx.2006.064337

- 87 patients
- RCT
- Placebo: lifestyle education
- 4 treatments over 2 months
Speech therapy components

### Table 2  Examples of strategies in the treatment programme

<table>
<thead>
<tr>
<th>Component</th>
<th>Example</th>
</tr>
</thead>
<tbody>
<tr>
<td>Education</td>
<td>No physiological benefit from cough; capacity for voluntary cough control</td>
</tr>
<tr>
<td>Strategies to reduce cough</td>
<td>Identify warning signs for cough and replace with modified swallow technique, pursed lip breathing exercise, or relaxed throat breath</td>
</tr>
<tr>
<td>Reduce laryngeal irritation</td>
<td>Increase hydration, decrease exposure to irritating stimuli</td>
</tr>
<tr>
<td>Psycho-educational counselling</td>
<td>Internalising locus of control; acceptance that treatment is hard work; setting realistic goals</td>
</tr>
</tbody>
</table>
Table 4: Comparison of mean (SD) pre- and post-intervention symptom scores and degree of change for participants in the treatment and placebo groups

<table>
<thead>
<tr>
<th>Score</th>
<th>Group</th>
<th>Pre</th>
<th>Post</th>
<th>Difference</th>
<th>95% CI</th>
<th>p value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Total</td>
<td>Treatment†</td>
<td>35.4 (16.0)</td>
<td>22.7 (18.0)</td>
<td>12.7 (12.7)</td>
<td>9.0 to 16.1</td>
<td>&lt;0.001*</td>
</tr>
<tr>
<td></td>
<td>Placebo‡</td>
<td>29.9 (13.5)</td>
<td>28.8 (16.5)</td>
<td>2.9 (12.5)</td>
<td>-0.7 to 6.5</td>
<td>0.170</td>
</tr>
<tr>
<td></td>
<td>Difference</td>
<td>5.5 (3.9)</td>
<td>1.9 (3.9)</td>
<td>3.6 (3.9)</td>
<td>0.4 to 3.2</td>
<td>&lt;0.001*</td>
</tr>
<tr>
<td>Breathing</td>
<td>Treatment†</td>
<td>7.9 (4.1)</td>
<td>5.0 (4.2)</td>
<td>2.9 (3.6)</td>
<td>1.8 to 3.9</td>
<td>&lt;0.001*</td>
</tr>
<tr>
<td></td>
<td>Placebo‡</td>
<td>6.6 (4.7)</td>
<td>5.5 (3.5)</td>
<td>1.1 (3.4)</td>
<td>0.1 to 2.0</td>
<td>0.004*</td>
</tr>
<tr>
<td></td>
<td>Difference</td>
<td>1.3 (1.3)</td>
<td>0.5 (1.5)</td>
<td>0.8 (1.8)</td>
<td>&lt;0.001*</td>
<td></td>
</tr>
<tr>
<td>Cough</td>
<td>Treatment†</td>
<td>8.8 (2.8)</td>
<td>4.9 (3.0)</td>
<td>3.9 (3.2)</td>
<td>3.0 to 4.9</td>
<td>&lt;0.001*</td>
</tr>
<tr>
<td></td>
<td>Placebo‡</td>
<td>7.5 (3.6)</td>
<td>6.3 (3.5)</td>
<td>1.2 (3.4)</td>
<td>0.3 to 2.2</td>
<td>&lt;0.001*</td>
</tr>
<tr>
<td></td>
<td>Difference</td>
<td>1.3 (1.3)</td>
<td>0.5 (1.5)</td>
<td>0.8 (1.8)</td>
<td>&lt;0.001*</td>
<td></td>
</tr>
<tr>
<td>Voice</td>
<td>Treatment†</td>
<td>7.2 (6.0)</td>
<td>4.7 (5.2)</td>
<td>2.5 (4.3)</td>
<td>1.2 to 3.7</td>
<td>&lt;0.001*</td>
</tr>
<tr>
<td></td>
<td>Placebo‡</td>
<td>6.5 (4.6)</td>
<td>6.2 (5.0)</td>
<td>0.3 (4.1)</td>
<td>-0.9 to 1.5</td>
<td>0.959</td>
</tr>
<tr>
<td></td>
<td>Difference</td>
<td>0.7 (1.4)</td>
<td>0.5 (1.4)</td>
<td>0.2 (1.2)</td>
<td>0.005*</td>
<td></td>
</tr>
<tr>
<td>Upper airway</td>
<td>Treatment†</td>
<td>9.2 (6.6)</td>
<td>6.5 (6.3)</td>
<td>2.7 (4.7)</td>
<td>1.4 to 4.1</td>
<td>&lt;0.001*</td>
</tr>
<tr>
<td></td>
<td>Placebo‡</td>
<td>7.4 (4.9)</td>
<td>7.4 (5.5)</td>
<td>0.0 (4.1)</td>
<td>-1.1 to 1.2</td>
<td>0.946</td>
</tr>
<tr>
<td></td>
<td>Difference</td>
<td>1.8 (1.8)</td>
<td>1.1 (1.1)</td>
<td>0.7 (1.7)</td>
<td>0.002*</td>
<td></td>
</tr>
<tr>
<td>Limitation</td>
<td>Treatment†</td>
<td>2.3 (1.2)</td>
<td>1.6 (1.0)</td>
<td>0.7 (1.1)</td>
<td>0.4 to 1.0</td>
<td>&lt;0.001*</td>
</tr>
<tr>
<td></td>
<td>Placebo‡</td>
<td>2.2 (1.1)</td>
<td>2.0 (1.0)</td>
<td>0.2 (0.9)</td>
<td>0.0 to 0.6</td>
<td>0.038*</td>
</tr>
<tr>
<td></td>
<td>Difference</td>
<td>0.5 (1.0)</td>
<td>0.6 (1.0)</td>
<td>0.1 (1.1)</td>
<td>0.011*</td>
<td></td>
</tr>
</tbody>
</table>

†Calculated using Wilcoxon signed rank test.
‡Calculated using Mann-Whitney U test.
Cough reduction therapy

Structured programme of cough reduction techniques

• **Education** (hypersensitivity, negative effects of excessive coughing)

• **Laryngeal hygiene** (hydration, nasal breathing, reduce alcohol/caffeine)

• **Cough control** (suppression or distraction: sip water, sweets, forced swallow). Breathing exercises (VCD).

• **Psycho-educational counselling** (behaviour modification, stress management)

• **Physiotherapy or speech therapy**

Chamberlain S; Lung 2013; 26;524
PSALTI Trial 2012-14

- Physiotherapy and Speech And Language Therapy Intervention RCT
- Refractory chronic cough
- Control (attention): lifestyle intervention
- Primary outcome QOL, LCQ
- LCM and capsaicin sensitivity
- 4 centres (Kings, Brompton, Preston, North Tyneside)

Chamberlain S et al, BTS 2014
PSALTI Trial

Screen

Placebo

PSALTI

Observation

Randomisation

DAY

-7

0

7

14

28

56

84

T1

T2

T3

T4

Treatment

Screen

VAS

QOL

CM

CRS

VAS

QOL

VAS

QOL

VAS

QOL

VAS

QOL

VAS

QOL

(post)

VAS

QOL

(post)
Patient recruitment

163 Screened

76 Randomised

Completed treatment week 4

26 PSALTI

37 Control
## Patient characteristics

<table>
<thead>
<tr>
<th>Characteristic</th>
<th>Placebo (n=41)</th>
<th>PSALTI (n=35)</th>
<th>p value</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Age (years)</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>n</td>
<td>41</td>
<td>35</td>
<td>0.24</td>
</tr>
<tr>
<td>n (years)</td>
<td>56 (48 to 67)</td>
<td>61 (53 to 67)</td>
<td></td>
</tr>
<tr>
<td>Female, n (%)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>n</td>
<td>41</td>
<td>35</td>
<td>0.46</td>
</tr>
<tr>
<td>n (%)</td>
<td>26 (63)</td>
<td>25 (71)</td>
<td></td>
</tr>
<tr>
<td>Cough duration (months)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>n</td>
<td>39</td>
<td>31</td>
<td>0.28</td>
</tr>
<tr>
<td>n (months)</td>
<td>48 (24 to 126)</td>
<td>60 (30 to 126)</td>
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</tr>
<tr>
<td>FEV1 (L, observed), mean(SD)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>n</td>
<td>36</td>
<td>30</td>
<td>0.52</td>
</tr>
<tr>
<td>n (L)</td>
<td>2.7 (0.9)</td>
<td>2.6 (0.7)</td>
<td></td>
</tr>
<tr>
<td>FEV1/FVC (% predicted), mean(SD)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>n</td>
<td>36</td>
<td>30</td>
<td>0.69</td>
</tr>
<tr>
<td>n (%)</td>
<td>76 (8.2)</td>
<td>76 (5.0)</td>
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</tr>
<tr>
<td>LCQ, mean(SD)</td>
<td></td>
<td></td>
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<td>n</td>
<td>41</td>
<td>34</td>
<td>0.07</td>
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<tr>
<td>n</td>
<td>1.19 (3.5)</td>
<td>10.4 (3.6)</td>
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<td>Cough Severity VAS</td>
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<td></td>
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<tr>
<td>n</td>
<td>37</td>
<td>32</td>
<td>0.65</td>
</tr>
<tr>
<td>n</td>
<td>65 (40 to 83)</td>
<td>63 (49 to 75)</td>
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<tr>
<td>Cough Urge VAS</td>
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<td>n</td>
<td>37</td>
<td>32</td>
<td>0.23</td>
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<tr>
<td>n</td>
<td>74 (44 to 85)</td>
<td>66 (51 to 76)</td>
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<td>SF-36 PCS, mean(SD)</td>
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<td>n</td>
<td>41</td>
<td>31</td>
<td>0.02*</td>
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<td>n</td>
<td>47.0 (8.7)</td>
<td>42.0 (10.0)</td>
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<tr>
<td>SF-36 MCS</td>
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<td></td>
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</tr>
<tr>
<td>n</td>
<td>41</td>
<td>31</td>
<td>0.76</td>
</tr>
<tr>
<td>n</td>
<td>47.7 (38.3 to 54.9)</td>
<td>49.9 (40.5 to 57.0)</td>
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<tr>
<td>HADs – Anxiety, mean(SD)</td>
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<td>n</td>
<td>33</td>
<td>26</td>
<td>0.79</td>
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<tr>
<td>n</td>
<td>7 (4)</td>
<td>7 (5)</td>
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</tr>
<tr>
<td>HADs – Depression, mean(SD)</td>
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<td></td>
</tr>
<tr>
<td>n</td>
<td>33</td>
<td>26</td>
<td>0.62</td>
</tr>
<tr>
<td>n</td>
<td>4 (3)</td>
<td>5 (4)</td>
<td></td>
</tr>
<tr>
<td>VPQ</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>n</td>
<td>40</td>
<td>28</td>
<td>0.16</td>
</tr>
<tr>
<td>n</td>
<td>17 (11 to 22)</td>
<td>21 (13 to 27)</td>
<td></td>
</tr>
<tr>
<td>CF&lt;sub&gt;24&lt;/sub&gt;</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>n</td>
<td>35</td>
<td>39</td>
<td>1.00</td>
</tr>
<tr>
<td>n</td>
<td>448 (228 to 754)</td>
<td>495 (222 to 720)</td>
<td></td>
</tr>
<tr>
<td>CF&lt;sub&gt;pe&lt;/sub&gt;hour.</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>n</td>
<td>39</td>
<td>30</td>
<td>0.95</td>
</tr>
<tr>
<td>n</td>
<td>19 (10 to 31)</td>
<td>21 (9 to 30)</td>
<td></td>
</tr>
<tr>
<td>C2 (µm)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>n</td>
<td>35</td>
<td>25</td>
<td>0.75</td>
</tr>
<tr>
<td>n</td>
<td>3.9 (1.95 to 7.80)</td>
<td>3.9 (1.47 to 15.6)</td>
<td></td>
</tr>
<tr>
<td>C5 (µm)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>n</td>
<td>35</td>
<td>25</td>
<td>0.99</td>
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<tr>
<td>n</td>
<td>7.8 (3.9 to 15.6)</td>
<td>7.8 (3.9 to 31.25)</td>
<td></td>
</tr>
</tbody>
</table>
Significant Improvement in QOL
Coughs per hour  (Leicester Cough Monitor)
RCT: Pregabalin + Speech Therapy vs. Placebo + Speech Therapy

- Pregabalin neuromodulator like gabapentin but has not been evaluated in cough.
- Neuromodulators good antitussive option in some but not all patients and efficacy is lost when discontinued.
- Is combination of pregabalin (300mg od) plus speech therapy for 3 months effective and sustained?
- Refractory Cough, 20 subjects each group
- Vertigan A, Birring S, Gibson, P et al Newcastle, NSW, Australia.

Chest In Press
Objective Cough Frequency

p = 0.67 change in Preg v Plac

Leicester Cough Monitor

Mean 1 cm and 95% CI

Baseline | Post treatment Study visit | Follow-up

3 mo | 4 mo

Speech Pathology + Pregabalin | Speech Pathology + Placebo
QOL

Leicester Cough Questionnaire

p=0.02 change in Preg v Plac

Mean log and 95% CI

Baseline Post treatment Follow-up

Speech Pathology + Pregabalin Speech Pathology + Placebo
Indications

- Refractory cough - alone or with drug therapy
- Idiopathic cough
- Vocal cord dysfunction
- Idiopathic pulmonary fibrosis?

Further research

- Which component(s) effective
- Number of sessions / duration
- Longer term outcomes
- Self help therapy - leaflet/web/DVD
Lung Cancer Cough

Coughing at night time seems to be the worst... when I'm lying there... and it can be a prolonged bad cough. I could be sick, but I've not been. But it's that sort of feeling that you just cough and cough and cough. The cough is the worst thing. [LivP3]

I cough and cough and then [I feel] oh I can't get my breath, oh I can't breathe... [I feel tired] sometimes, depends on the length of the bout of coughing...
Manchester Cough in Lung Cancer Scale

This questionnaire asks you to describe your experience of cough in the past week.

Please answer question one and then read the instructions before completing the rest of the questionnaire.

1. In the past week how often have you coughed?

<table>
<thead>
<tr>
<th>Never</th>
<th>Some of the time</th>
<th>Often</th>
<th>Most of the time</th>
<th>All of the time</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
</tr>
</tbody>
</table>

If you answered “Never” to question 1, please stop completing the questionnaire and return it to us.

If you indicated that you have experienced cough in the past week, then please complete the rest of the questionnaire.

For each question, please circle one option that best describes your experience of cough over the past week.

2. Do you have difficulty breathing when you cough?

<table>
<thead>
<tr>
<th>Never</th>
<th>Some of the time</th>
<th>Often</th>
<th>Most of the time</th>
<th>All of the time</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
</tr>
</tbody>
</table>

3. Do you have difficulty bringing up sputum (phlegm) when you cough?

<table>
<thead>
<tr>
<th>Never</th>
<th>Some of the time</th>
<th>Often</th>
<th>Most of the time</th>
<th>All of the time</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
</tr>
</tbody>
</table>

4. Does your cough disturb your sleep?

<table>
<thead>
<tr>
<th>Never</th>
<th>Some of the time</th>
<th>Often</th>
<th>Most of the time</th>
<th>All of the time</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
</tr>
</tbody>
</table>

5. Does your cough distress you?

<table>
<thead>
<tr>
<th>Never</th>
<th>Some of the time</th>
<th>Often</th>
<th>Most of the time</th>
<th>All of the time</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
</tr>
</tbody>
</table>

6. Does coughing make you frustrated?

<table>
<thead>
<tr>
<th>Never</th>
<th>Some of the time</th>
<th>Often</th>
<th>Most of the time</th>
<th>All of the time</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
</tr>
</tbody>
</table>

7. Do you worry that your cough means that your condition is getting worse?

<table>
<thead>
<tr>
<th>Never</th>
<th>Some of the time</th>
<th>Often</th>
<th>Most of the time</th>
<th>All of the time</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
</tr>
</tbody>
</table>

8. Do you feel in control of your cough?

<table>
<thead>
<tr>
<th>Never</th>
<th>Some of the time</th>
<th>Often</th>
<th>Most of the time</th>
<th>All of the time</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
</tr>
</tbody>
</table>

9. Does coughing interrupt your conversations or telephone calls?

<table>
<thead>
<tr>
<th>Never</th>
<th>Some of the time</th>
<th>Often</th>
<th>Most of the time</th>
<th>All of the time</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
</tr>
</tbody>
</table>

In question 10, you should indicate how severe your cough has been in the past week.

10. Please rate how severe you think your cough is

<table>
<thead>
<tr>
<th>Very mild</th>
<th>Mild</th>
<th>Moderate</th>
<th>Severe</th>
<th>Very severe</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
</tr>
</tbody>
</table>
Management of the respiratory distress symptom cluster in lung cancer: a randomised controlled feasibility trial

Janelle Yorke¹,² · Mari Lloyd-Williams³ · Jacky Smith⁴,⁵ · Fiona Blackhall²,⁵ · Amelie Harle² · June Warden¹ · Jackie Ellis³ · Mark Pilling¹ · Jemma Haines⁶ · Karen Luker¹ · Alex Molassiotis¹,⁷

Respiratory Distress Symptom Intervention (RDSI) components:
Breathing techniques: diaphragm, anxiety
Cough easing: forced swallow, relaxed throat breathing, identify triggers
Acupressure: hands, sternum, knees

Two F2F meetings (1 week apart) and telephone FU
Delivery: nurse, physio, complementary therapy
Christie Hospital
Outcomes 1 and 3 months
Multiple outcomes, no primary

RDSI vs usual care
Patients screened n=715

Ineligible: 608
- absence of 2 or more symptoms or not bothersome 176
- poor prognosis 40
- further treatment 55
- recent chemotherapy 130
- other reasons 128
- declined 74
- reason unknown 5

Patients randomised n=107

Removed from further analysis:
- 2 did not meet eligibility criteria;
- 1 no baseline data

INTERVENTION ARM
- Allocated to RDSI n= 53
- Included in analysis n=50

CONTROL ARM
- Allocated to control n=54
- Included in analysis n=51

Removed from further analysis:
- 2 did not meet eligibility criteria; 1 no baseline data

DO during intervention:
- 4 too unwell; 1 died; 1 shingles; 1 declined

DO post intervention:
- 1 died; 8 declined; 3 lost to follow-up

4 week assessment
- Patients n=31

12 week assessment
- n=31

5 died; 4 declined; 1 lost to follow-up

4 week assessment
- Patients n = 41

12 week assessment
- n=40

2 lost to follow-up
Dysnoea D-12

Cough

Baseline Wk-4 Wk-12

Baseline

P=0.026

95% CI MCLC Total

P = ns

Group
- Control
- RDSI
RDSI

- Breathing exercise compliance 87-100%
- Cough technique compliance 32-63%
- RDSI: greater focus SOB > cough?
- Need more targeted approach?
Summary

- Self management cough reduction therapies are effective alone or in combination with antitussive medication
- Objective reduction in coughing
- Safe
- Delivered by physio or speech therapist
- Efficacy is sustained at 3 months
- Next steps, promote therapy and training for therapists
- Need trials cancer, COPD, pulmonary fibrosis.
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