Clinical outcomes of patients referred to Speech & Language Therapy with Chronic Cough (CC)

Alison Little, Senior Specialist Speech and Language Therapist

Background

The involvement of speech and language therapists (SLT's) in the management of chronic cough (CC) is evolving and SLT's with skills in voice disorders are increasingly seen as integral to the respiratory multi-disciplinary team (MDT). At Frimley Park Hospital there have been increasing SLT referrals from the Respiratory Team for people with CC.

CC impacts on quality of life and can cause embarrassment and avoidance which can lead to increased absence from work, social isolation and relationship breakdown (Raj and Birring, 2007). These factors can impact on employment due to interference with job performance and/or prolonged periods of sick leave. CC can also impact on mental wellbeing and is associated with urinary incontinence, voice problems, vomiting and disturbed sleep due to coughing which leads to fatigue, irritability and depression (French et al, 1998).
In terms of service impact:

- 40% of respiratory referrals are for Chronic Cough (Schappert et al, 2006). This is of great significance to healthcare and economic costs. Morice et al (2006) suggest that the cost to the UK economy is 979 million.
- 40% of referrals are unresponsive to standard treatment (Prater, 2006) and Respiratory Consultants are often at a loss to know what to offer to alleviate symptoms.

There is emerging evidence for SLT intervention for CC (Vertigan et al, 2006; Gibson et al, 2009). Research has also shown that combined SLT and Physiotherapy interventions achieve a 41% reduction in cough frequency (Chamberlin- Mitchel et al, 2016).

Aim

The aim of undertaking this evaluation was to determine whether SLT therapy yields beneficial outcomes for patients referred with chronic cough.

Methodology

The SLTs providing treatment were all specialist voice therapists with some training in management of cough/upper airways disorders. The patients were either referred from the respiratory team or from the Ear Nose and Throat team (ENT) with a specific problem of CC.

All patients had a long-standing cough that had not benefitted significantly from any other treatment to date. This was either a 'stand-alone' problem or occasionally in addition to other voice or breathing problems. All sessions were one-to-one and face to face.

Data was collected at initial assessment and end of treatment. This included the Leicester Cough Questionnaire (LCQ), as this has good repeatability and has a set threshold where a change in score of 2.56 is highlighted as significant. The L.C.Q. (Fowler, 2016) also records patient's perceptions of their cough and its impact on their lives.

The Reflux Symptom Index (RSI) was also used to determine whether gastro oesophageal reflux was likely to be a significant contributory factor in CC. The LCQ questions include:
Sleep- In the last 24 hrs has your cough disturbed your sleep?
Well-being- In the last 24hrs has your cough interfered with the overall enjoyment of life?
Employment- Has your cough interfered with your job or other daily tasks?
Mental Health- Has your cough made you feel anxious?

Therapy input techniques were patient-specific and included reflux management advice, identification of irritants, laryngeal de-constriction techniques, relaxation/mindfulness training and cough inhibition techniques.

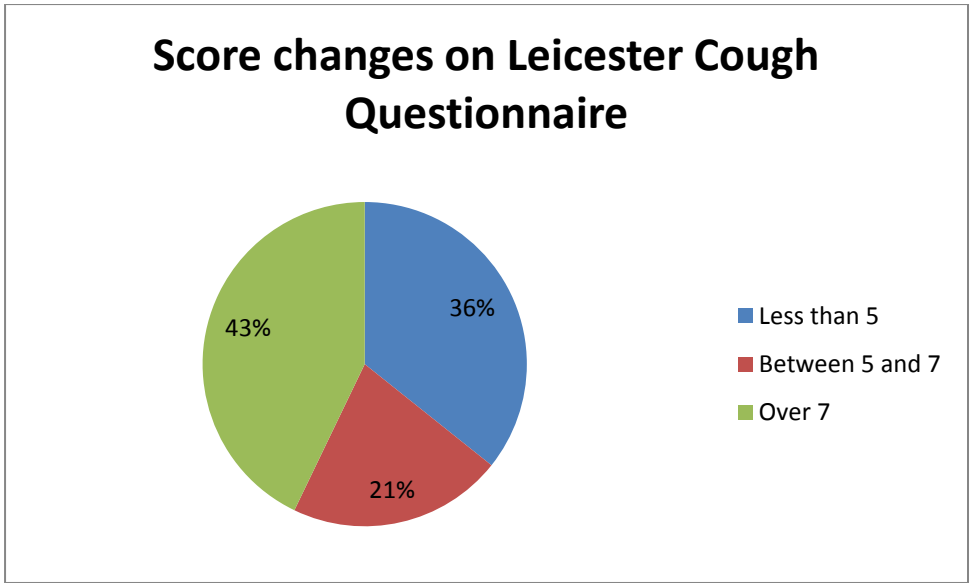
Results
A total of 14 patients completed therapy for CC during a 9-month period.

The L.C.Q. outcomes were as follows:

The L.C.Q. has a set threshold where a change in score of 2.56 or more is considered significant. All patients treated showed a change of more than 2.56 on the LCQ, indicating a significant improvement in their cough. Sixty-four percent showed a change of more than 5 which is very significant (See fig.1). The average score change was 6.13.

The number of sessions required to achieve this varied from 1 to 6 (average = 3). Two patients only required one session for assessment and advice before discharge.
The pie chart (fig 1) below shows how all patients benefitted significantly from therapy and very high percentages of patients benefitted well above the significance level. Therapy therefore appeared to have a significant impact on quality of life for these patients.

Fig.1



RSI Outcomes

Patients who scored highly on the RSI at initial assessment were typically given dietary/lifestyle advice for reflux as well as advice to use an alginate (such as 'Gaviscon Advance'). Alginates have been shown to decrease the number of reflux events by forming a raft on top of the stomach contents and therefore offering a supplemental mechanism of action to acid suppression (Reimer et al, 2016). 50% of patient scores reduced to within the normal level. The remaining 50% did not reach 'normal' levels but showed at least a 9 point reduction in score, which is significant. It is therefore likely that therapy had a beneficial effect on reducing CC and the cycle of irritation.

Patients also commented:

'I am so much less worried about my cough now I understand it. My cough is linked to reflux and my reflux is worse when I get stressed. I understand that I can manage my cough best by using stress control strategies.'

'Now my cough is under control I am more positive more able to stand up for myself and less likely to be a victim'

'The therapist has provided me with exercises, tools and tips to help me get my coughing under control and hopefully keep it that way! She has made a huge difference to my work and home life – I am very grateful to her, and so is my husband!'

Learning points:

For some patients only one or two sessions were necessary therefore going forward an initial cough 'group session' giving information and advice will be offered at the start of therapy as this may be sufficient for some patients. This would be also be more cost effective. Anyone requiring further input will then be offered individual sessions**.**

Conclusions

Many of the patients referred had complained of CC for a number of years with no previous treatment options being helpful to alleviate symptoms. The outcomes achieved with SLT techniques supports the literature and represents a genuine and cost-effective treatment option for these patients going forward. The service has now been made available across the Trust and therapy usually starts with a group session which is currently done virtually.

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