Nursing Practice

5 key points

1. Bronchiectasis is caused by irreversible dilatation, thickening and sac-like formations in the bronchial walls.

2. It can result in recurrent bacterial chest infections and symptoms such as breathlessness, cough, wheeze and chest pain.

3. Reducing infective exacerbation is an essential part of management.

4. Patients with bronchiectasis have a mean FEV1 annual decline of 50-55ml, similar to that seen in COPD.

5. Despite therapies, some adults with bronchiectasis, mucous plugging or bronchial sepsis have troublesome hypersecretions.

were invited to a one-hour appointment in a well-ventilated room to try the treatment and learn about the equipment. They then administered the HTS at home once a day for two months and were reviewed in a 15-minute clinic appointment. The coordinator of the nebuliser service was involved and available to patients for advice and equipment replacement; her number was put in the information booklet.

Referrals were accepted from all respiratory team members once all standard therapies had been exhausted; patients were invited to clinic within four weeks. We agreed inclusion and exclusion criteria. Patients with bronchiectasis, mucous plugging and bronchial dilatation identified on high resolution computer tomography scanning (HRCT) or bronchoscopy were included, as were those with recurrent chest infections and hypersecretions or who had troublesome hypersecretions.

A visual analogue 10-point scale for indication of effort required for sputum clearance and a Juniper mini-asthma quality of life questionnaire were also completed, and patient-reported sputum quantity recorded. Tests were repeated at two months, when patients’ perceptions of their condition was also recorded. The follow-up was completed by 15 men and 26 women; the median age of the men was 62 years (range 31-70) and that of the women 63 years (range 38-82) – very different from those with cystic fibrosis.

Results

Spirometry

Seven patients had normal range spirometry at baseline. Six had irreversible severe airflow obstruction because of COPD. All these patients were included in the analysis to prevent post-hoc subdivision analysis. A paired t-test found a statistically significant improvement in FEVs1 and forced vital capacity. The clinical significance was borderline, but, for some patients, the change was dramatic.

Visual analogue scale

A 10-point visual analogue scale was adapted from the Borg perception of breathlessness scale. All patients reported an increase of at least one point on the scale at follow-up. There was a mean rise of three points within a range of 1-10 points.

Sputum quantity

Nearly half (49%) of patients reported a rise in sputum expectorated daily. This is notoriously poorly estimated by people so we told the patients about the British Thoracic Society’s recommended measurement method and advised them to note daily sputum quantity over two months on a chart.

One patient reported a daily increase from 120ml to 220ml. Another had no phlegm before or after administration but experienced a dramatic improvement after three large mucous plugs were dislodged.

References