Breathlessness in the elderly

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AIMS

To consider breathlessness in the elderly in the context of:

- Prevalence in the elderly
- Co-morbidity and multimorbidity
- Breathlessness, ageing and the sociology of illness
- Service implications

SUMMARY

Prevalence in the elderly

Breathlessness is a common symptom, representing approximately 1% of presentations to primary care,[1,2] and increases substantially in prevalence with age.[1] Population surveys in Australia estimate that 17% of the population over the age of 65 years experience breathlessness,[3] and a survey of patients over the age of 70 years registered with primary care practices in Wales found a prevalence of 32%.[4] The severity of the dyspnoea increases with age; with 4% have a modified Medical Research Council (mMRC) breathlessness score of 3 or 4 (breathless on walking >100 metres; housebound) compared to 1% in the overall population.[3] This has a significant impact on extended activities of daily living, with significant disability in mobility, domestic tasks and leisure activities.[4]

The commonest causes of breathlessness in these elderly populations are pulmonary (chronic obstructive pulmonary disease (COPD), asthma); cardiovascular (atrial fibrillation, heart failure); obesity, anxiety/depression.[4]

Comorbidity and multimorbidity

These two concepts are distinct. Comorbidity is defined from the specialist perspective of an index disease with other additional conditions. In contrast multimorbidity adopts the generalist (and patient) perspective of recognising several co-existent conditions none of which necessarily assumes precedence.

Comorbidity

Comorbidity is defined as ‘Any distinct additional entity that has existed or may occur during the clinical course of a patient who has the index disease under study’. [5] In the context of breathlessness, COPD is the commonest pulmonary cause of dyspnoea,[3,4] COPD, however, is a condition in which at least 4 out of 5 patients have additional comorbidities[6] many of which may contribute to the dyspnoea (e.g. coronary heart disease, atrial fibrillation, heart failure, depression/anxiety) or limit the exercise the patient is able to take (e.g. painful conditions, stroke).
Multimorbidity

Multimorbidity is the co-existence of two or more chronic conditions in the same individual. No single disease takes precedence and different conditions may be the most important and demand attention at different times.[7] ‘Whatever hurts the most is what is taken care of... the squeaky wheel gets the oil’ [Female 80yrs].[7]

Multimorbidity increases with age. In a study using primary care records of nearly 2 million people from Scotland, by the age of 65 years half had two long-term conditions and a third had three conditions.[6] The authors conclude that multimorbidity is the norm. Deprivation is a crucial factor with young and middle-aged adults in the most deprived areas having rates of multimorbidity equivalent to those aged 10–15 years older in the most affluent areas.[6]

Implications of multimorbidity for the management of breathlessness in the elderly

- Diagnosis: It is crucial to recognise that a symptom of breathlessness may be due to more than one condition and to ensure that diagnostic tests encompass all common causes of dyspnoea so that all contributing causes are identified. A worsening of breathlessness may not be due to the known condition: a new or previously less significant condition may be the cause of increased symptom.
- Management: Treatment of all the contributory causes need to optimised
- Competing challenges: Awareness that some conditions – or their treatments – may aggravate or prevent the management of others. Beta-blockers required for heart failure are contra-indicated in a patient with asthma;[8] osteoarthritis may make it difficult to exercise so that a patient is unable to realise the benefits of pulmonary rehabilitation.[9]

Breathlessness, ageing and the sociology of illness

Coping with chronic breathlessness

People adopt many strategies to cope with breathlessness and may not always present to a clinician especially if their condition starts gradually and they believe it to be part of normal aging. This has been studied extensively in COPD

The example of COPD

Breathlessness is the cardinal symptom of COPD. There are numerous systematic reviews summarising the evidence on the impact of disabling breathlessness on the physical, psychological, social and spiritual well-being of people with COPD. A good overview is provided in the evidence synthesis by Giacomini.[10] Several studies have noted the reluctance of people with COPD to request help despite often severe disabilities.[11] This has been referred to as ‘the silence of people with COPD’. [12] Reasons for this silence ‘include:

- The insidious onset, such that the breathlessness develops almost imperceptibly over decades [13] and people gradually adapt their lifestyles to accommodate the disability.[14]
- Expectations of aging ‘when you reach this age you know lots of things are going to fall apart’. [7]
- Multimorbiditity so that an increase in breathlessness is assumed to be due to an existing condition and a new cause is not considered (either by the patient or the clinician).
Sociological classification of health problems.

In a seminal work ‘Hard Earned Lives’[15] Jocelyn Cornwell identifies three types of health problems:

- **Normal illnesses.** Illnesses that resolve either spontaneously or with treatment such as common infections, childhood ailments
- **Real illnesses.** Disabling and life-threatening chronic diseases such as cancer, cardiovascular disease, diabetes, accidents. The correct response to a ‘real illness’ is likely to be to seek clinical advice.
- **Health problems which are not illness.** Natural processes or conditions ‘related’ to person’s life such as ageing, menstrual problems/menopause, arthritis, tiredness. The more appropriate response to a normal/expected consequences of life may be to cope oneself.

**COPD**

In many ways, COPD falls into this latter category of a health problem which is not illness. It is related to lifestyle (smoking/exposure to indoor pollution) and develops over a lifetime of exposure [16] so that it becomes a way of life and the symptoms are often described by patients as ageing. “It’s all just part of getting older ... ”[COPD patient T03.1][11]

**Lung cancer**

In contrast, in lung cancer the breathlessness started suddenly, and once a diagnosis of cancer was confirmed the management of the cancer was the important issue.[13]

**Motor neurone disease**

Patients described a fairly acute onset for the breathlessness. In the context of a neurological disease, the breathlessness made patients realise that the illness affects mechanisms essential for living.[13]

**Service implications**

A good overview of service implications for management of people with breathlessness is available from IMPRESS (a joint initiative between the British Thoracic Society and the Primary Care Respiratory Society (PCRS)-UK to drive improvements in care) with resources downloadable from [http://www.impressresp.com](http://www.impressresp.com)

**Making a diagnosis**

A number of studies describe algorithms designed to streamline the diagnosis of breathlessness. Typically, a tiered approach is used to identify or exclude pulmonary, cardiac and other causes of breathlessness. One concern is that algorithms utilising few core ‘Tier 1’ investigations (e.g. only electrocardiogram (ECG) and spirometry) may efficiently detect key diagnoses (COPD, atrial fibrillation) but if patients diagnosed at Tier 1 do not have any Tier 2 investigations (e.g. blood tests, echocardiography) additional or contributory factors (such as heart failure, anaemia, or thyroid dysfunction) will not be detected.[17] This is likely to be of particular importance in elderly patients in whom multimorbidity is the norm. With a more inclusive battery of initial tests (ECG, full blood count, thyroid function tests, brain natriuretic peptide (BNP), spirometry, diffusion capacity, chest X-ray) one in five patients at a US breathlessness service were found to have more than one cause for their breathlessness.[18] In a similar referral service in Denmark, only 39% of the diagnoses made by the referring general practitioner were upheld; heart failure was revealed in 12% patients not suspected of heart failure and lung disease in 29% of patients not suspected of pulmonary disease.[19] Overall the
diagnostic conclusions for the 284 patients were: heart disease 17%; lung disease 35%; combined heart and lung disease 14%; other diagnoses 19% and no definite diagnosis 15%

Addressing breathlessness symptoms

The schema of considering breathing, thinking and functioning is appropriate in the elderly. Insights into the meaning of breathlessness,[10,11,13-15] may inform how people think about their breathlessness, and studies of the practical aspects of living with breathlessness [4,10,11,20] will inform the impact of dyspnoea on functioning and the social support required.

Proactively managing the impact of breathlessness [20]

Providing care for people with chronic breathlessness is challenging, especially those who perceive their condition is a way of life (‘just getting older’);[11,13] who have adapted to living within the confines of their breathlessness and consider themselves as ‘normal’ (between exacerbations),[10,11,14] and who are often ‘silent’ about their needs.[10,12,14] A formal holistic assessment may identify disabilities and difficulties but this may not translate into ‘needs’ on the patient wants action.[20]

Addressing management of chronic disabling symptoms as part of routine care throughout the life-history of a condition (such as COPD, heart failure) may enable help to be offered sensitively and respecting the comfortable adaptation that has occurred.

Key messages

- Breathlessness increases in prevalence and severity with age
- Pulmonary and cardiovascular causes predominate… … but there are many other causes – and multimorbidity is the norm
- Increasing breathlessness is often interpreted as ‘old age’
- Chronic breathlessness may be under reported as patients with long-term conditions adapt to their disabilities and circumstances
- Proactive management of the impact of breathlessness needs to be offered incrementally throughout the lifetime of the condition

REFERENCES


