



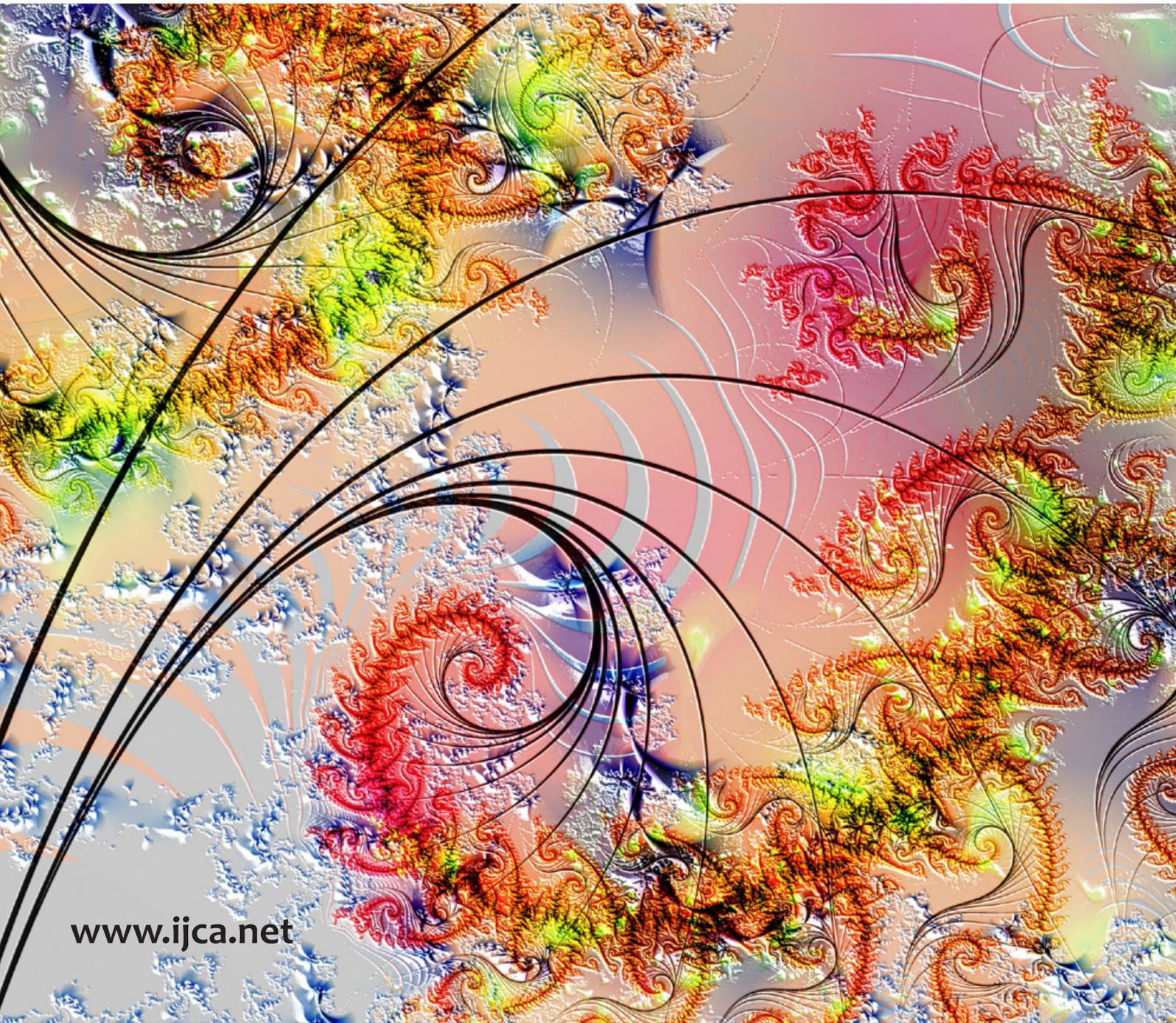
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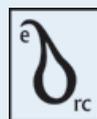
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EDITORIAL

Over the past 25 years in the Western world, complementary therapies (CTs) have increasingly been used alongside conventional medical care for people with cancer, from diagnosis, through treatment, survivorship and into end-of-life care. In the UK alone, it is estimated that up to one third of all persons with cancer use CTs in a supportive role (Smithson et al, 2010). Aromatherapy, together with massage and reflexology, is one of the most popular CTs accessed in cancer and palliative care environments and is included in CT service provision in all the leading cancer hospitals in England, Wales, Northern Ireland and Scotland. Until recently, CT services had their own place in the National Institute of Clinical Excellence guidance manual on cancer services (2004); however, this section has sadly been removed from the latest guidance review, with the risk of negative consequences on continued service provision.

The main reasons that most patients with cancer choose CTs such as aromatherapy are to improve their experience of conventional care, to enhance personal well-being and to help manage symptoms linked with the disease or its treatment. Few patients are seeking active treatment options concerning their disease – they are simply seeking reassurance that the therapy is safe, appropriate and that it will serve to complement their ongoing medical care

From the patient's perspective, one of the biggest barriers to a positive experience of CT is perceived polarization between complementary therapies and conventional medicine (Smithson et al, 2010). This polarization can be experienced by patients at both a professional and institutional level and highlights the delicate and influential relationship the person has with their general practitioner, their oncologist and/or other key members of their medical team. If

the person encounters a reluctance to talk about CTs from their doctor, receives mixed reactions or senses hostility towards CTs, it is likely they will be more anxious and/or less likely to access them as part of their supportive care.

Patient involvement, dialogue, clear communication and education are therefore, more than ever, essential for ensuring continued care provision. In the words of Lewith et al (2010) it is “*in our interest to create dialogue between conventional and complementary practitioners treating cancer and in particular for oncologists to allow the patient to play an important, active and informed role in managing their illness and survival.*”

Through publication of rigorous and pertinent papers that clearly demonstrate the value of aromatherapy provision in cancer and palliative care, medical professionals are better informed as to the safe and positive contributions of essential oils for persons with cancer - whatever the stage of their journey with their disease. Hence choosing cancer and palliative care as the overall themes for this and the following issue of the IJCA.

Rhiannon Lewis

Lewith G, Britten N, Paterson C. Complementary and alternative medicine (CAM) and cancer: the kind face of complementary medicine. Letter to the editor. *Int J Surgery*. 2010;8(1):81.

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Breathlessness in patients with life-limiting illness: The potential of aromatherapy

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Breathlessness is a common and debilitating symptom experienced by patients with chronic respiratory disease which increases over the course of life-limiting illness. The underlying causes are multi-factorial, involving a complex interplay of physical, psychological, spiritual and social factors (Corner et al, 1995). As such, successful management requires an array of interventions tailored to the patient's subjective experience. However, pharmacological approaches are not without unpleasant side-effects and non-pharmacological interventions have not been fully evaluated or routinely suggested.

Within aromatherapy, the direct interface between inhaled essential oils and the respiratory mucosa, offers rapid access and symptom-relief for several respiratory disorders. This has been well documented in the general population (Harris, 2007, Baudoux, 2007, Buckle, 2015). Combined with an aromatherapist's holistic approach to care, these recognised aromatherapy interventions offer plausible potential for symptom-relief in breathlessness management. This paper explores breathlessness in patients with life-limiting illness and considers how aromatic interventions can be adapted and integrated into clinical practice and influence future research initiatives.

Introduction

Cited as one of the core symptoms of four main life-limiting illnesses, breathlessness affects up to 70% of patients with advanced cancer, 95% with chronic obstructive pulmonary disease (COPD), 88% with heart failure (HF) and 85% with motor-neurone disease (MND) (Gysels and Higginson, 2011). Additionally, breathlessness affects patients with dementia, advanced age, HIV and is highly prevalent in patients receiving end-of-life care, particularly in the last 3-months of life (Kamal et al, 2011).

Traditional approaches to the assessment and management of breathlessness have predominantly revolved around its physiological measurement. However, Bausewein et al (2018) point out that in advanced stages of illness, these objective findings

do not fully illustrate the distress experienced by patients. Consequently, the emphasis is to consider the patient's actual descriptions as exemplified in these excerpts:

"I feel as though I've permanently just run really fast to catch a bus" (Taylor, 2007) *"I feel my breathing is more rapid"*, *"I feel hunger for more air"*, *"I feel I am suffocating"* (Kamal et al, 2011) whilst others report breathlessness as *"hard work"*, *"frightening"*, *"painful"* or a *"continuous fight"* (BPJ, 2012). These reveal far more about the true nature of the person's experience and the impact of breathlessness on their daily life.

Recently, the medical term, 'dyspnoea', often used interchangeably with 'breathlessness', has been regarded as limited in its focus to *"the clinical*

signs of an underlying condition” (Bausewein et al, 2018). Again, this may not adequately demonstrate the patient’s unique and subjective experience. Regardless of the diagnosis, breathlessness is ultimately a patient-centred symptom which is reflected in the definition of The American Thoracic Society, “a subjective experience of breathing discomfort that consists of qualitatively distinct sensations that vary in intensity” (American Thoracic Society, 1999).

Causes of breathlessness within palliative care

Breathlessness in advanced illness is recognised as a complex interplay of physical, psychological, emotional and spiritual factors which should not be separated (Corner et al, 1995). To aid healthcare professionals, Abernethy and Wheeler (2008) describe a biopsychosocial framework derived from Dame Cicely Saunders concept of ‘total pain’. Known as ‘total dyspnoea’, the authors use the same physical, psychological, spiritual and social domains to collectively consider the patients unique experience of breathlessness (see Figure 1).

Physiological factors

In a review of breathlessness in patients with life-limiting illness, Kamal et al (2011) discuss several

causal factors. These are summarised in Table 1. It is evident that breathlessness is not solely attributed to the physical disease itself. Often, it can result as a systemic effect of advanced disease processes, for example in situations where cachexia and fatigue are present. Furthermore, in patients with cancer, breathlessness can also be treatment-related, including surgery, radiation pneumonitis/fibrosis, radiation-induced pericardial disease, chemotherapy-induced pulmonary disease and chemotherapy-induced cardiomyopathy (Dudgeon et al, 2001).

Psychological factors

Irrespective of the underlying diagnosis, the association between anxiety, panic attacks, fear and spiritual distress with breathlessness in advanced illness has been well documented (Corner et al, 1995; Nardi et al, 2009; Gysels and Higginson, 2011; Schroedl et al, 2014). Patient narratives from qualitative investigation highlight the intensity of these feelings, see Table 2.

An interesting feature of Gysels and Higginson’s (2011) qualitative investigation, is that patients with cancer, COPD and MND describe the onset and nature of breathlessness in emotional terms, where anxiety, panic and fear featured prominently over physical limitations. winter savory. In contrast,

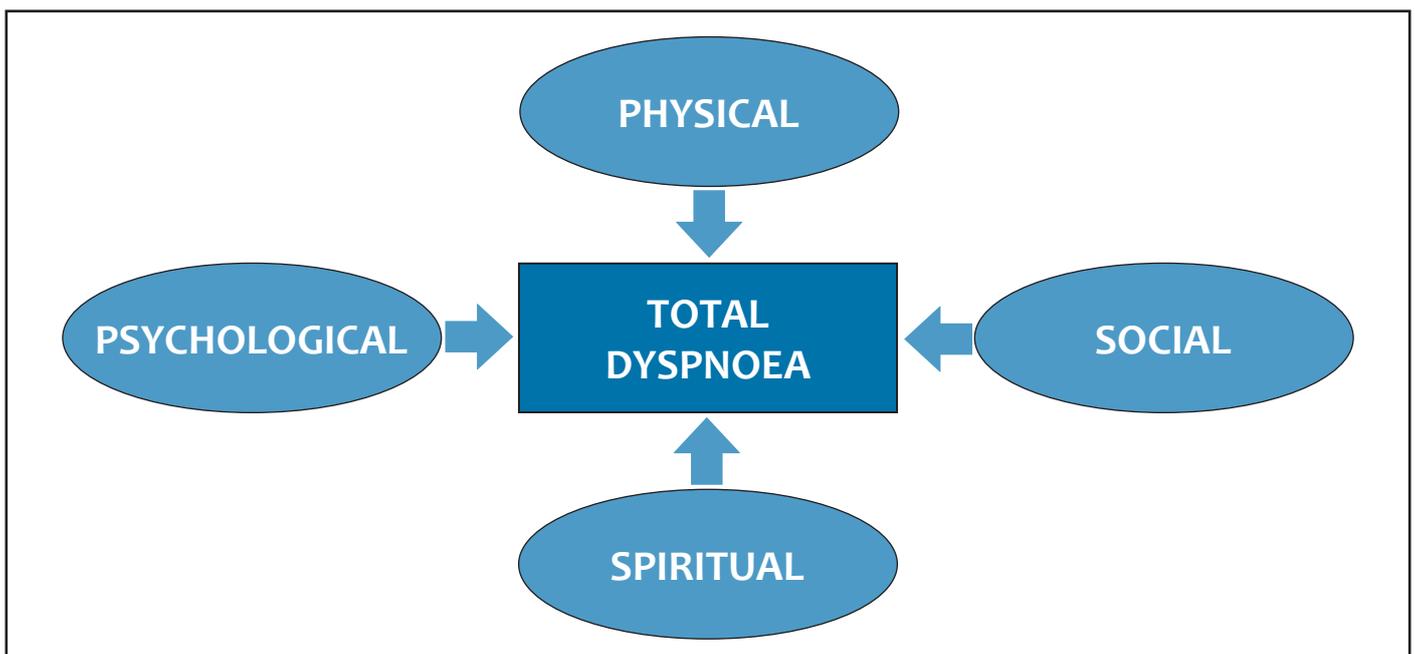


Figure 1. Total dyspnoea model (adapted from Abernethy and Wheeler, 2008)

Table 1. Anatomic and underlying disease giving rise to breathlessness (Kamal et al, 2011)

Pulmonary obstruction	COPD, reactive airways, cough/secretions, mass lesions
Pulmonary restriction	Fibrosis or other interstitial disease, effusions, fibrosis, infections, kyphosis, obesity
Perfusion/oxygenation mis-match	Anaemia, pulmonary hypertension, heart failure, pulmonary embolism
Fatigue/weakness	Cancer-related fatigue, multiple sclerosis, amyotrophic lateral sclerosis

patients with HF discuss breathlessness in relation to its physical restriction arising from the negative effects of other symptoms.

A small audit, conducted at St Christopher’s Hospice, identified that levels of anxiety and panic in patients referred for breathlessness management, are often significantly higher than patients or their referring clinician estimate (Taylor, 2007). Other emotional manifestations of breathlessness include intense irritability, irrational outbursts, anger, worry and frustration (Taylor, 2007; Schroedl et al, 2014). These may be attributed to depleted oxygen levels (hypoxia), although Taylor (2007) asserts, *“it can be an understandable emotional response to existential terror”*.

Spiritual factors

Many patients experiencing breathlessness report fear of an uncertain future. For those with cancer, Gysels and Higginson (2011) identified that breathlessness, which initially prompted patients to seek medical investigation, became less important when they were given a diagnosis of cancer. Patients then described feelings of ‘shock’ with an immediate association with death.

Fear of dying featured prominently in Schroedl et al (2014) study of patients with COPD, together with fear of losing their independence and of suffering. Consequently, patients report an inability to face the future and cope by taking one day at a time. Living in the present is a strategy Gysels and Higginson (2014) observed in patients with MND

Table 2. Patient narratives reflecting the psychological manifestations of breathlessness

<p>A patient with metastatic oesophageal cancer: <i>“It’s a terrible feeling of panic, I don’t know if I’ll be able to get another breath. I’m quite literally fighting for my life, and I’m scared that I will suddenly stop breathing and die.”</i> (Taylor, 2007)</p> <p>A patient with lung cancer: <i>“I was stopping in the street taking that (inhaler) and it never done a thing. I was breathing in for dear life but it wasn’t helping. I think that if that don’t work it makes the panic worse, you’re in a state because you’ve got nothing else to take.”</i> (Gysels and Higginson, 2011)</p> <p>A patient with heart failure: <i>“...sometimes it depresses me coz you feel useless, incompetent, you can’t do a simple task, like I try to put me socks on and I’m struggling and I might get one on and with a bit of luck and I go to get the other one and I have to give up and I’m upset.”</i> (Gysels and Higginson, 2011)</p>

as a means of adjusting to symptoms and the future. For these patients, where there is no known cure, breathlessness reaffirmed the way in which “*the illness affects mechanisms essential to life*”.

Social factors

Social isolation is a common and disabling issue for patients. Psychological and spiritual distress, combined with the physical restriction of breathlessness, inhibits every single movement, limiting daily activities to the extent of rendering patients housebound (Gysels and Higginson, 2011; Schroedl et al, 2014).

Clearly, the underlying factors of breathlessness in advanced illness are multi-factorial. The inter-play between physical, psychological, spiritual and social domains is complex and should not, as advised by Corner et al (1995), be separated. This has significant implications for effective breathlessness management.

Current management of breathlessness

Within the palliative care literature, authors are generally agreed that the goal of breathlessness interventions is to address both the symptom and underlying causes (Corner, 1995; Kamal et al, 2012; BPJ, 2012). However, when causes are no longer reversible, breathlessness, if present, is considered ‘refractory’ with priority on symptom-relief (BPJ, 2012). Interventions are categorised into pharmacological & non-pharmacological.

Pharmacological interventions

In a review of dyspnoea management, Kamal et al (2012) highlight opioids, most commonly morphine, as the most extensively researched and first-line pharmacology for the management of breathlessness. Additional effects of opioids lie with treating pain and anxiety, both of which are integral to this complex symptom. Careful dosing and titration has drawn researchers to the same conclusion, that low-doses of sustained-release oral opioids exert a significant and continuous therapeutic benefit in breathlessness relief.

Anxiolytics, in the form of benzodiazepines, have been studied both as single agents and in combination with opioids (Kamal et al, 2012). However, a Cochrane review identified that this class of pharmacology causes more side effects, such as drowsiness and somnolence in the breathless patient with limited beneficial value (Simon et al, 2010). Similarly, intra-nasal midazolam, considered a popular method of application, was also found to have no therapeutic advantage when compared with an intra-nasal placebo (Hardy et al, 2016).

Traditionally, supplemental oxygen for breathlessness has been a standard line of management for patients in hospital and palliative care settings. However, its use is complex and its benefit limited (Baldwin and Cox, 2016). Subsequent investigation conducted by Abernethy et al (2010), recommends that patients are monitored closely and supplemental oxygen be discontinued if no relief is observed after 3 days.

The role of nebulised medications may be beneficial, such as saline solution 0.9% to increase mucus fluidity, or nebulised bronchodilators to relieve airway spasm or constrictions (Thurukkumaran, 2013). Other pharmacology for managing underlying causes of breathlessness are summarised by Balkstra (2010). These include diuretics to alleviate excess fluid volume; bronchodilators and corticosteroids for their anti-inflammatory action, particularly in situations of airway obstruction.

Non-pharmacological interventions

Many of the non-pharmacological approaches to breathlessness management are derived from those used by patients with COPD, who learn through experience to adapt to the gradual onset of symptoms (Gysels and Higginson 2011). In contrast, patients with cancer generally present with a sudden onset of breathlessness with little time to adjust.

Corner et al (1995) evaluated the effectiveness of nurse-led strategies for the management of breathlessness in patients with cancer. The success of this seminal study prompted a larger scale replication (n=119), by Bredin et al (1999). Patients were randomised to receive either nurse-led interventions as outlined in Table 3, or best supportive management.

Table 3. Nurse-led interventions for breathlessness carried out by specialist nurses (Bredin et al, 1999)

- Comprehensive assessment of breathlessness including factors which exacerbated or alleviated symptoms
- Exploration of the meaning of breathlessness, their disease and feelings of the future
- Advice and support for patients and their families on ways of managing breathlessness
- Training in breathing control techniques, progressive muscle relaxation (PMR) and distraction exercises
- Goal setting to complement breathing and relaxation techniques to help the management of functional and social activities and to support the development and adoption of coping strategies
- Early recognition of problems warranting pharmacological or medical intervention

Following 8 weeks of intervention, improvements in breathlessness, performance status as well as physical and psychological states were demonstrated in patients attending the nurse-led clinics. A striking feature is that nurse-led strategies were tailored to the individual's needs, involving both family and caregivers.

Within palliative care, Kamal et al (2012) discuss non-pharmacological pulmonary rehabilitation through exercise for patients with COPD and those with cancer; increasing air movement through the use of hand-held fans; the use of combination gases such as heliox as well as acupuncture and nutrition. Whilst several show promise for the management of breathlessness, the authors conclude that further investigation is required with interventions directed to the components of the aforementioned 'total dyspnoea' model.

Clearly, the management of breathlessness in patients with life-limiting illness is complex and requires a combination of pharmacological and non-pharmacological approaches designed for the individual's needs. Although the role of aromatherapy in this area has not been evaluated, it is important to examine the clinical evidence and potential of aromatherapy as a plausible non-pharmacological intervention.

Aromatherapy in breathlessness management: current clinical evidence

The direct interface between essential oils and the respiratory mucosa offers rapid access and symptom relief, making it an area of research interest. Predominantly, the constituent 1.8-cineole, an oxide with bronchodilatory, mucolytic, anti-inflammatory and antitussive properties, is considered the component of choice for respiratory

Table 4. Essential oils rich in 1.8-cineole suitable for respiratory pathologies (Harris, 2007)

Essential oil botanical name	Essential oil common name
<i>Cinnamomum camphora ct cineole</i>	Ravintsara
<i>Eucalyptus radiata</i>	Narrow-leaved eucalyptus
<i>Eucalyptus globulus</i>	Blue gum eucalyptus
<i>Laurus nobilis</i>	Laurel
<i>Lavandula latifolia</i>	Spike lavender
<i>Melaleuca cajuputi</i>	Cajeput
<i>Melaleuca quinquenervia</i>	Niaouli
<i>Myrtus communis</i>	Myrtle
<i>Rosmarinus officinalis ct cineole</i>	Rosemary
<i>Thymus mastichina</i>	Spanish marjoram

pathologies (Harris, 2007). Essential oils rich in 1.8-cineole are listed in Table 4.

Harris (2007) reports on several studies which have evaluated the benefits of these oxide-rich oils in respiratory illness, including management of COPD. For these patients, improvements were identified in mucociliary clearance, increased ciliary beat frequency, cough relief, lung function, peak flow and dyspnoea, using oral routes of administration.

Alongside 1.8-cineole, Baudoux (2007) advocates other verified essential oil components for respiratory care. These include the mucolytic effects of ketone-rich oils such as *Eucalyptus dives* (peppermint eucalyptus), *Rosmarinus officinalis* (rosemary) chemotypes camphor & verbenone; the antispasmodic, relaxant and anti-inflammatory effects of ester-rich oils *Cananga odorata* (ylang ylang), *Anthemis nobilis* (Roman chamomile), *Citrus aurantium* var. amara (petitgrain); the bronchodilatory effects of phenyl methyl ether-rich oils *Foeniculum vulgare* (fennel), *Pimpinella anisum* (aniseed) as well as the antihistaminic & anti-inflammatory effects of *Matricaria recutita* (german chamomile) and the antitussive effects of *Cupressus sempervirens* (Cypress) and *Eucalyptus radiata* (narrow leaf eucalyptus).

Buckle (2015) dedicates an entire chapter to respiratory care, where the effects of aromatherapy in common acute and chronic respiratory conditions have been evaluated. In patients with COPD, Myrtol (brand name Gelomyrtol), an essential oil derived from eucalyptus globulus, lime and pine, has shown value in reducing cough (Mattys et al, 2000 cited in Buckle, 2015) and for its anti-inflammatory activity within lung alveoli (Rantzsch, 2009 cited in Buckle, 2015).

Another growing area of interest is the notion of using essential oil components to activate transient receptor potential ion channels (TRP) located within the airways, to increase airflow. Horvath & Acs (2015) detail the physiological mechanisms of TRP channels which are believed to play a key role in respiratory disorders including COPD and cough. Of particular interest is TRPM8, an ion channel which is thermoreceptive, detects cool temperatures and is activated by the monoterpenol, menthol and to a lesser extent 1.8-cineole.

Researchers investigating the inhaled effects of these components in nasal TRPM8 channels, report that the cold sensation experienced in the nose is associated with an increased sensation of improved airflow even if airflow remains unchanged (Burrows et al, 2009). Such an approach may be useful for breathlessness management and is discussed in a subsequent section.

The potential of aromatherapy

A wealth of evidence-based information exists within the aromatherapy literature which relates to essential oil use in general respiratory care. Although not specific to the management of breathlessness in life-limiting illness, many of the approaches offer potential therapeutic value to these patients. However, the success of integrating such aromatherapy interventions is dependent upon several issues relating to the patients experience of breathlessness in advanced illness, which include:

1. Patient assessment
2. Essential oil choices
3. Botanical hydrosols
4. Working alongside patients with breathlessness
5. Aromatherapy applications

1. Patient assessment

The patient's perception of breathlessness, rather than its objective measurement, is paramount. Therefore, assessment must begin with their words and descriptions. Frequent themes arising from qualitative studies, highlight the stigma, guilt and self-blame with which patients associate their breathlessness (Gysels and Higginson, 2011; Schroedl et al, 2014). This is particularly evident in those with COPD, HF and cancer where causative factors include smoking, environmental influences, poor life choices and lifestyles. To aid our understanding of a patient's experience, Bredin et al (1999) advocates:

- Exploration of what breathlessness means to the individual
- How breathlessness impacts their life
- What a patient understands about their illness
- How a patient views their future

Additional to this holistic approach, factors which exacerbate breathlessness and those which alleviate it, are other important considerations.

Careful observation of the patient offers valuable information as to the degree of respiratory distress. Characteristic signs of acute breathlessness are listed in Table 5. Sensitive assessment is required which neither exhausts the patient nor provokes their breathlessness. With the patient's consent, family members and carers can also be useful in providing specific details.

It is important to determine what the primary concern is for the patient. This may not necessarily be related to the physical effort of breathing but more with the management of panic and anxiety associated with the feeling of not being able to get sufficient air into the lungs. Working directly with the patient's priorities of concern is crucial.

2. Essential oil choices

Generally, respiratory conditions are most responsive to essential oils with bronchodilatory, mucolytic, anti-inflammatory, antitussive, antihistaminic and relaxing properties (Harris, 2007; Baudoux, 2007; Buckle, 2015). These will be discussed within the context of breathlessness in the patient with advanced respiratory illness.

Anxiety, panic and spiritual distress

Psychological and spiritual distress feature significantly in patients experiencing breathlessness and include, fear of not being able to get sufficient breath, of suffocating, suffering and dying. Essential oils with anxiolytic and highly calming properties are obvious choices and do not possess the central nervous system side-effects associated with benzodiazepines.

Table 5. Characteristic signs of acute breathlessness

- Mouth breathing – often 'purse-lipped breathing'
- Lip cyanosis
- Gasping for air
- Excessive use of accessory muscles of respiration which are prominent on inspiration
- Short, hurried sentences
- Evidence of a productive or non-productive cough

For management of advanced respiratory-related psychological distress, Knapp-Hayes (2015) advocates *Citrus bergamia* (bergamot), *Anthemis nobilis* (roman chamomile), *Lavandula angustifolia* (lavender), *Origanum majorana* (sweet marjoram), *Boswellia carterii* (frankincense), *Citrus aurantium var. amara* (petitgrain), *Nardostachys jatamansi* (spikenard) and *Cananga odorata* (ylang ylang). Additionally, my personal experience would include *Salvia sclarea* (clary sage), *Agonis fragrans* (fragonia), *Santalum spicatum* (sandalwood) and *Citrus reticulata* (mandarin). Readers are also directed to earlier texts which outline aromatic interventions for the management of spiritual distress in patients with cancer and end-of-life care (Knapp-Hayes, 2015; Rose, 2017).

Mucus and expectoration

Clearing mucus secretions can be difficult and exhausting for the breathless patient. For patients who are physically able to cough, the aim of aromatic intervention is to reduce inflammation and increase mucus fluidity and expectoration. In a detailed account of mucus management of the bronchi, Hadji-Minaglou and Maeda (2007) recommend essential oils with proven anti-inflammatory, mucolytic and expectorant properties as listed in Table 6.

For maximum effect and to avoid compromising normal function of the mucociliary escalator, Harris (2004) advocates low-dose essential oil intervention. Applications involving steam inhalation aid humidification and consequently mucus fluidity which may enhance ease of expectoration. However cautions are indicated which are discussed in a subsequent section.

Table 6. Essential oils with proven properties suitable for respiratory mucous management (Hadji-Minaglou and Maeda, 2007)

Essential oil	Proven properties
<i>Eucalyptus camadulensis</i> (eucalyptus river red gum)	Fibrosis or other interstitial disease, effusions, fibrosis, infections, kyphosis, obesity
<i>Eucalyptus radiata</i> (narrow leaved eucalyptus)	Anaemia, pulmonary hypertension, heart failure, pulmonary embolism
<i>Myrtus communis</i> (myrtle)	Cancer-related fatigue, multiple sclerosis, amyotrophic lateral sclerosis

Cough

Cough can be problematic for the breathless patient. Designed as a protective mechanism to expel irritants or blockages from the air passages, cough can also result from the disease itself or its pathophysiological consequences. It can be a source of exhaustion and distress for both the patient and their family and needs to be managed carefully.

Cough arising from bronchial spasm may be relieved by essential oils with recognised bronchospasmolytic properties. Harris (2004) and Baudoux (2007) suggest *Carum carvi* (caraway), *Artemisia dracuncululus* (tarragon), *Cananga odorata* (ylangylang), *Anthemis nobilis* (Roman chamomile), *Citrus aurantium var. amara* (petitgrain), *Ammi visnaga* (khella), *Angelica archangelica* (angelica), *Inula graveolens* (sweet inula), *Melissa officinalis* (melissa) and *Ocimum basilicum ct methyl chavicol* (exotic/ tropical basil).

In some patients, cough suppression may be required. The antitussive effects of essential oils such as *Eucalyptus radiata* (narrow leaf eucalyptus) and *Cupressus sempervirens* (cypress) have proven benefits (Baudoux, 2007), in addition to specific oil components of menthol and 1.8-cineole (Morice et al, 1994; Plevkova et al, 2013).

Cautions and contraindications of essential oil use

In breathlessness related to life-limiting illness, where the effects of aromatherapy have not been fully evaluated, there are specific cautions and contraindications of essential oil use. These are

summarised in Table 7. In patients with heightened odour acuity, hypersensitivity to aromas or airway hyper-reactivity, avoiding essential oils altogether may be more appropriate. For these patients, botanical hydrosols may be a plausible alternative.

The issue of using essential oils or other oil-based botanical products on or near the face/nares (as well as to hair, moustache, upper chest and hands) in patients using supplemental oxygen, is an ongoing area of debate and to date, no clear guidelines exist. As oxygen supports combustion, the identified hazard is an increased risk of fire should there be a source of ignition. Given that essential oils and fixed oils are flammable, the argument is that their presence may increase the risk of burns to the patient. Generally, most patient information literature and pharmacist recommendations advocate against using oil, grease or petroleum jelly when handling patients under oxygen therapy (or handling medical equipment associated with the therapy) including products to alleviate oxygen-therapy-induced chapped lips, dry mouth and nares (Bauters et al, 2016). This is an area that requires further evaluation with regards essential oils - either topically applied or via airborne diffusion. Aromatherapists working with patients on oxygen therapy should always check the oxygen safety policy related to their place of work.

Botanical alternatives for patients experiencing the discomfort of the drying effects of oxygen therapy are to increase humidification using hydrosols in the form of spritzers, aqueous nasal sprays and mouth rinses, as well as incorporating water-based

Table 7. Cautions & contraindications of essential oil use in advanced respiratory care (adapted from Harris, 2004; Tisserand and Young, 2014)

- Increasing mucus fluidity in patients who are physically unable to cough must be avoided.
- High concentrations of inhaled essential oils can decrease mucociliary function. Employ low-level dosing.
- Duration of inhaled essential oils is as important as concentration. Incorporate shorter diffusion or inhalation times.
- Oils rich in 1.8-cineole, menthol and camphor possess stimulating aromas which may, for the breathless patient, induce bronchial spasm. Low-level dosing is required.
- Other essential oil constituents cited as potential respiratory irritants include the monoterpenes, α -pinene, β -pinene, δ -3-carene and (+)-limonene.
- Inhaled menthol or 1.8-cineole therapy should not be applied on or near the face of babies, infants or small children.
- Careful monitoring and evaluation of all aromatic approaches is crucial.
- In end-of-life care, where decreased mucociliary clearance and ineffective cough reflex result in accumulated secretions in the air passages, avoid essential oils with mucolytic and expectorant properties. In these situations, respiratory congestion is best managed by anti-cholinergic drugs such as scopolamine.

botanical products such as *Aloe vera* gel or oil-in-water emulsions.

3. Botanical hydrosols

Botanical hydrosols can be invaluable for patients experiencing breathlessness. Generally, patients prefer a cool, well-ventilated environment with circulating air. Combining portable fans with cool misting hydrosol sprays directed at the face can be immensely soothing. Additionally, cold compresses soaked in hydrosol applied to the forehead, nape of the neck or the face can supplement the fans beneficial effect. Useful options include; *Rosa damascena* (rose), *Citrus aurantium var. amara* (neroli), *Lavandula angustifolia* (lavender) or *Anthemis nobilis* (Roman chamomile).

Dry oral mucosa exposed to supplemental oxygen therapy, or through mouth breathing, can be refreshed with oral rinses or ice-chips made with hydrosols. Useful options include; *Mentha x piperita* (peppermint), *Origanum majorana* (sweet marjoram), *Satureja montana* (winter savoury) or *Abies balsamea* (balsam fir).

In patients where mucus fluidity can be increased, Hadji-Minaglou and Maeda (2007) advocate

oral hydration with fresh herbal tisanes at 5% (5g plant material to 95g water – 2 litres daily) or diluted botanical hydrosols such as *Laurus nobilis* (laurel leaf) or *Myrtus communis* (myrtle) (500mls hydrosol to 1.5 litres water daily). For patients with advanced illness, these amounts may be overwhelming, although it does offer an alternate choice of hydration.

4. Working alongside patients with breathlessness

“Everything is deliberate. I plan every move before I make it because I don’t want to go back and do it again” (Excerpt from a patient with COPD: Schroedl et al, 2014).

A calm, unhurried and mindful approach brings reassurance and a sense of security to the person with breathlessness. This includes knowing when to reach out with a caring touch or whether to simply sit and be present with the patient or family member. It is an opportunity to observe and invite interest about their experience. Central to working alongside these patients is a basic understanding of their disease and respiratory function. Liaising with the multi-professional hospital/community teams aids awareness of the underlying pathology, current treatment and medical intervention.

Table 8. Self-care strategies to aid the patient with breathlessness (adapted from Taylor, 2007)

- Dress & undress sitting down; take frequent rests
- Inhale to reach, exhale to bend down
- Put on footwear by crossing the leg at the knee, not bending
- Wear slip-on shoes and front-opening clothes
- Use a stool or chair in the shower
- Avoid very hot water
- Ensure the bathroom is ventilated
- Wear a towelling robe after a bath or shower to absorb the moisture
- Dry shave in preference to wet shave to reduce prolonged arm movements
- Use an electric toothbrush and avoid strong mint toothpaste
- Eating and drinking require advanced breathing control: pause and pace
- Limit time spent speaking on the telephone; there are no visual clues for pacing
- Consider a walking aid, stick or rollator, to provide support and means of pacing
- Use a care-propelled wheelchair for mobilising distances

Of primary concern to patients is the increasing loss of independence, not only in terms of social isolation and associated depression, but it can result in worry about being a burden to others. Combined with symptom relief and alleviation of psychological and spiritual distress, these factors underpin a patient's dignity (Chochinov et al, 2002). Where breathlessness is a restrictive issue, practical interventions aimed at preserving dignity are discussed by Taylor (2007) and listed in Table 8. Some of these can be adopted by aromatherapists and integrated into clinical practice. This offers the patient solutions to fulfilling simple activities independently, as well as an opportunity to practice breathing control.

Breathing control is central to breathlessness management. Whilst most patients benefit from a session with a physiotherapist, there are simple breathing techniques which aromatherapists can use in clinical practice. Within the palliative care setting, Taylor (2007) encourages focus on extended exhalation rather than deep-inhalation techniques which emphasise effort and frustration. By using calm instruction, as exemplified in the text of Table 9, patients are encouraged to extend their exhalation by simply sighing it out. Reflexively, inhalation will follow, in a less forceful way. Initially, this technique may feel counter-intuitive for patients, but with practice and support, Taylor (2007) states, "*when mastered the effect can be dramatic*".

In addition to Taylor's (2007) insightful recommendations, Carter and Mackereth (2017) dedicate a chapter to '*Easing the breathing body*' which offers therapists further practical information regarding breathing control.

5. Aromatherapy applications

Any aromatic intervention requires careful consideration and needs to be appropriate to the patient's ability and priority of concern. The most valuable method is through inhalation. Whilst allowing for the cautions and contraindications previously discussed, essential oil formulations of low-level dilution can be administered by steam-inhalation, personalised aromatherapy inhaler, aromapatches and rollerball applicators.

Humidification through traditional methods, such as a steam bowl beneath a towel, may be too claustrophobic for the breathless patient. Other options include; individual hand held steam-inhalation devices such as 'Clearway®', or using a few drops of essential oil formulation in a ceramic dish in the shower. Another consideration is to combine essential oils with sodium chloride 0.9%, delivered through a nebuliser systems, as described by Knapp-Hayes (2015). Although the question of essential oil dispersion, safety and appropriate dosage is unclear, it is an interesting area for future evaluation. For

Table 9. ‘Breathlessness poem’: a step-by step strategy to help the breathless patient manage acute panic episodes (Taylor, 2007)

Be still
Be calm
Drop the shoulders
Slowly sigh Out.....and.....Out
Hear the sigh – “Haaah”
Soft and quiet
Feel control returning
Peaceful and safe

patients with odour hypersensitivity, nebulised diluted botanical hydrosols without essential oils could also be a valuable alternative.

Air movement is reported as a vital sensation for patients experiencing breathlessness. The notion of using menthol-rich essential oils to activate respiratory TRPM8 ion channels, induce a cooling effect and enhance the sensation of airflow, has been discussed. For management of breathlessness in advanced illness, Harris (2004) advocates low-level formulations using personalised aromatherapy inhalers or through nasal-gel applications. Potentially, this offers the patient an intervention which requires minimal exertion, whilst at the same time, optimising quality of care and comfort.

Massage, using light strokes and shorter treatment times, may bring subjective relief to patients who can tolerate touch and are physically able to sit, well-supported on a massage chair. For patients fatigued by the very act of breathing, light application of a lotion or balm to the chest, posterior rib cage and neck musculature may be more comforting.

Other aromatherapy applications which minimise exertion for these patients include footbaths, compresses, or simple cold-air diffusion of oils for short periods.

Conclusion

Breathlessness is an intense and intractable symptom which directly impacts every aspect of a patient’s daily life. Within advanced illness,

Bredin et al (1999) advocate, “interventions based on psychosocial support, breathing control and coping strategies can help patients deal with their breathlessness.” Aromatherapists can make a valuable contribution to breathlessness management through holistic approaches to care, adaptation and integration of proven aromatic approaches, as well as incorporating breathing control techniques.

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