

“Total Dyspnea”:

more than pulmonary function tests and oxygen saturation.

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Dyspnea is a frequent and devastating symptom in patients with advanced cancer (1,2). It is often defined as an “uncomfortable awareness of breathing”, and its prevalence has been reported to range from 21% to 78.6% in the days or weeks prior to death (3,4).

In the cancer population, there are multiple contributing factors to the development of dyspnea, including pre-existing diseases like asthma or COPD, cancer related factors like airway obstruction or pleural effusion, cancer-treatment related factors like damage from radiotherapy or chemotherapy, acute events like pneumonia or pulmonary embolus, and miscellaneous factors like anaemia, cachexia or anxiety (5).

Dyspnea presents multiple challenges to the clinician, due to its poorly understood pathophysiology, subjective nature and lack of correlation between its severity and objective measurements such as oxygen saturation and pulmonary function tests.

Furthermore, multiple psychological, spiritual, social and emotional factors may impact the patient’s perception and expression of dyspnea (5).

The following case highlights this: A 45 year-old woman with a Bronchioalveolar Carcinoma of the Lung was admitted to our Tertiary Palliative Care Unit for ongoing management of dyspnea and chest pain. She had a history of heavy smoking and COPD, and upon diagnosis she was told about the terminal nature of her illness. This caused an enormous amount of distress, as this woman had worked as an executive assistant in a bank for many years and planned very carefully her life, including marriage, children, work and a recent retirement that she had not had a chance to enjoy due to the diagnosis of cancer. The patient underwent multiple thoracentesis for symptomatic relief due to malignant pleural effusion, with less clinical benefit each time. Upon admission to the TPCU, opioids were started subcutaneously, as well as steroids, bronchodilators and oxygen. Initially, the patient was very reluctant to accept opioid analgesics for the management of pain and dyspnea due to fear of the side effects of these drugs, mainly confusion and drowsiness, but finally agreed. Relaxation techniques and visualization techniques were also tried, as non-pharmacological adjuvants for dyspnea relief. The patient’s husband, devastated by her diagnosis and terminal status, had a difficult time accepting conventional therapies and tried multiple forms of alternative therapies in an attempt to cure her disease, unsuccessfully. The Social Worker and the Chaplain of the unit, as well as the other members of the interdisciplinary team, provided psychosocial support to the patient and the family, especially around existential distress issues, communication of the terminal nature of the patient’s disease to the two teenage daughters, and anticipatory grief counselling to the whole family.

With all of these interventions, the patient achieved adequate pain and dyspnea control and requested the discontinuation of all the medication, indicating that she did not need them anymore as her symptoms had subsided and she did not want to depend on drugs to feel well. After extensive discussions and education, the patient agreed to continue her

medications as they were prescribed. Unfortunately, she went on to develop Lymphangitic Carcinomatosis with resulting worsening of her dyspnea. A discussion was held with the patient and her husband about the potential need for palliative sedation for control of refractory dyspnea, which was accepted by the patient but emphatically opposed by the husband, who was still trying to find a cure for her disease. However, as the patient's condition continued to decline and her dyspnea became refractory to conventional therapies, the appropriateness of this intervention was evident to the husband. With the support of the interdisciplinary team, he accepted the use of palliative sedation and this was started upon her request. The patient died peacefully surrounded by family members two days later.

The linkage between anxiety and shortness of breath has been well established in the obstructive lung disease and chronic pulmonary disease settings (6,7). Multiple studies have looked into this relationship in the advanced cancer/palliative care setting with similar results, highlighting the multidimensional nature of dyspnea (8,9,10). Oral or parenteral opioids remain the mainstay of the pharmacological treatment of dyspnea, irrespective of the underlying cause. Some pharmacological and non-pharmacological interventions have been validated as adjuvants for the management of this devastating symptom in chronic respiratory patients and palliative patients(11,12,13). Many of these interventions are targeted at addressing the psychological, spiritual, social and emotional issues that severely impact the patient's perception and expression of dyspnea, which is essential to provide comprehensive and holistic care to the palliative care population.

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