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Review Article

The pathway to comfort: Role of palliative care for serious COVID-19 illness

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ABSTRACT

The novel coronavirus disease (COVID-19) pandemic has led to significant distress among people of all age groups. Patients with advanced age and severe life-limiting illnesses are at increased risk of death from COVID-19. Not all patients presenting with severe illness will be eligible for aggressive intensive treatment. In limited resource setting, patients may be triaged for supportive care only. This subset of patients should be promptly identified and receive appropriate palliative care with adequate symptom control strategies and psychosocial support. Breathlessness, delirium, pain, and noisy breathing are main symptoms among these patients which can add to the suffering at end-of-life. The COVID-19 pandemic also contributes to the psychological distress due to stigma of the illness, uncertainty of the illness course, fear of death and dying in isolation, and anticipatory grief in families. Empathetic communication and holistic psychosocial support are important in providing good palliative care in COVID-19 patients and their families.

Keywords: COVID-19, Coronavirus, Palliative care, End-of-life care, Communication, Psychological support

INTRODUCTION

Why palliative care in COVID-19 illness?

The coronavirus (COVID-19) pandemic and its mitigation measures have resulted in a humanitarian crisis and are redefining the global health-care scenario. With millions affected, the World Health Organization (WHO) is reporting an average death rate between 2% and 4%, with the death rate among elderly patients at 15–22%.[1] Patients with severe life-limiting illnesses such as advanced cancer, end-stage organ impairment, comorbidities, and the elderly are at increased risk of mortality from COVID-19. Triaging policies set according to local exigencies might triage this subset of patients with severe COVID-19-related respiratory illness to receive only supportive care.[2,3] Those with serious acute respiratory illness secondary to COVID-19 not receiving or not eligible to receive aggressive intensive care management should receive appropriate symptom management measures.[4] As much as physical repercussions of the disease demands attention, the mental health issues also need to be addressed.

What is palliative care?

Palliative care, with a biopsychosocial-spiritual model of care, is an active holistic care of individuals across all ages with serious health-related suffering due to severe illness and especially of those near the end-of-life.[5] It emphasizes on early identification of symptoms and its control,

empathetic communication, psychosocial and spiritual support, end-of-life care, and bereavement care.

Who should receive palliative care in a humanitarian crisis?[6]

A subset of the population with COVID-19 will develop severe symptom burden and respiratory distress. Not all will be eligible for aggressive intensive care management due to their underlying conditions, especially those who are elderly with multiple comorbidities, end-organ impairment, and advanced cancer.[3] When the health-care system is overwhelmed with COVID-19 patients, and the resources are limited, these patients may be triaged for supportive treatment only. This guideline addresses the symptom management and supportive care strategies in patients with serious COVID-19 illness not suitable for intensive care treatment and ventilation.

COVID-19 patients not suitable for ventilation are categorized as stable, unstable, and end-of-life. The categorization is based on the early warning parameters recommended by the National Health Service and WHO.[7,8] The parameters used in categorization are early warning scores, respiratory rate, and oxygen saturation [Tables 1 and 2].[9]

Palliative care triaging in COVID-19 is classified into four categories [Table 3]. In the patients with code blue and red, palliative care should be integrated with the acute services and disaster response team for rapid and emergency palliative care.

Table 1: Categorizing COVID-19 patients not suitable for ventilation.

Stable	a. EWS ≤7
	b. RR ≤25/min
	c. O_2 saturation >88% (on 60% venturi mask)
Unstable	a. EWS >7
	b. RR>25/min
	c. O_2 saturation <88% (on 60% venturi mask)
End-of-life	a. ARDS
	b. O_2 saturation <70%

ASSESSMENT AND MANAGEMENT OF COMMON SYMPTOMS IN COVID-19 PATIENTS

COVID-19 patients and their families with severe acute respiratory illness experience debilitating symptoms, physical and psychological, that need assessment and management.

Physical symptom management

The physical symptoms could be due to the direct effect of COVID-19, exacerbation of pre-existing condition, or side effects of the treatment. In this review, we will be discussing the symptoms that are caused by the direct effect of COVID-19. Breathlessness, delirium, respiratory secretions, and pain are the common symptoms that need immediate attention [Table 4].[10]

Dyspnea can develop in COVID-19 patients with severe acute respiratory symptoms.[11] The intensity of dyspnea can be assessed using visual dyspnea scale and appropriate management can be initiated. Delirium is common in patients with acute and serious illness needing ICU care or at the end-of-life either due to sepsis, metabolic disturbances, cerebral hypoxia, or medications. Patients with delirium may have varied presentation from hypoactive to/or mixed type of delirium with fluctuating levels of activation which needs to be recognized and managed.[12] Respiratory secretions seen in 20–90% of patients in the last days or hours of life can be very distressing. Interventions focused at reducing secretions aim to alleviate the distress of the care providers, even though the patients may not be aware of this.[13] Etiology of pain in an ICU setting could be multifactorial and can be due to illness *per se* or due to medical procedures and invasive interventions. Proper assessment and management prevents distress and suffering of the patients and their families and aims at providing good end-of-life care.[14]

Management of intractable symptoms

In a subset of patients, adequate relief of symptoms with the above measures may not be possible. These patients can experience increased distress and are best managed by administering medications to induce a state of decreased

Table 2: Early warning score.

SCORE→	3	2	1	0	1	2	3
Temperature (C)	<35		35.1–36	36.1–38	38.1–39	>39	
Heart rate (beats/min)	<41		41–50	51–90	91–110	111–130	>130
Systolic BP (mm/Hg)	<91	91–100	101–110	111–219			>219
Respiratory rate (breaths/min)	<9		9–11	12–20		21–24	>25
Oxygen saturation (%)	<92	92–93	94–95	>96			
Supplemental oxygen		Yes		No			
CNS response				GCS>12			GCS<12

awareness. Palliative sedation is used to relieve the suffering caused by intractable symptoms.[15]

PRE-REQUISITES FOR INITIATING PALLIATIVE SEDATION AND STEP-WISE APPROACH [FIGURE 1]

- Assessment to ascertain irreversibility of the clinical condition and symptoms
- Communication to family regarding refractory symptoms and lack of effective strategies to manage within a reasonable period of time
- Sensitive information sharing and shared decision-making
- Informed consent
- Documentation of clinical condition, prognostication of illness, proposed approach, probable duration of sedation, and any anticipated side effects.

End-of-life symptom management of serious COVID-19 patients not ventilated or discontinued ventilation

Patients who are not ventilated or discontinued from ventilation can develop severe breathlessness, delirium, and moist breathing. A combination of medications either as a continuous infusion or intermittent dosing along with breakthrough medications can be administered to such patients.[16] Anticipatory prescription would help address the specific symptoms at end-of-life and reduce distress [Table 5].

Psychosocial support

Patients and their families diagnosed with COVID-19 undergo a great deal of suffering caused by the physical manifestation of the disease, the uncertainty, fear of illness and death, stigma, and the socioeconomic hardships. Palliative care focuses on alleviating suffering, both physical and psychological. The various aspects of psychosocial distress among patients with COVID-19, their caregivers, and health-care providers are outlined below and recommendations provided for their management.

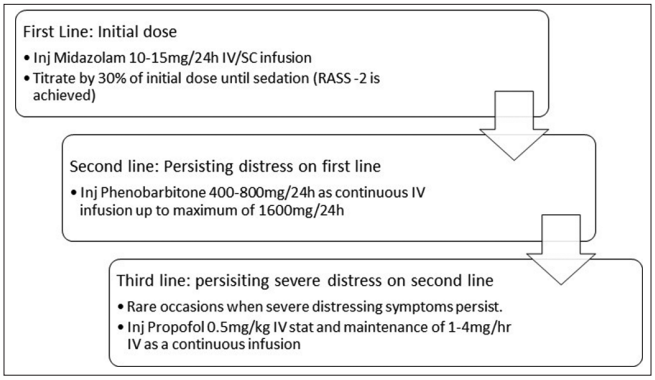

Figure 1: Stepwise approach for palliative sedation.

Communication tips for health-care providers during COVID-19

Many health-care providers find communicating the diagnosis and prognosis in the setting of serious illnesses challenging, more so during the COVID-19 pandemic. The physical distancing norms, the PPE, the stigma, and lack of time and skill, and the sudden deterioration that occurs in this setting make these conversations extremely difficult.

Health-care providers need to communicate effectively to

a. To share information in a timely, clear, and precise manner with patients/families
b. To treat patients nearing end-of-life and their families with dignity and compassion
c. To promote collaboration between patients/families and health-care providers and local bodies to ensure adherence to public health norms.

Steps for communicating with patients affected by COVID-19 and their families[10,17,18]

1. Ensure comfort
2. Check emotions

Table 3: Palliative care triaging in COVID-19 situations.[20]

Category	Color code	Description	Palliative care involvement
Immediate	Red	Survival only possible with immediate treatment	Emergency palliative care integrated with active care and disaster response
Expectant	Blue	Survival not possible given the care available	Emergency palliative care integrated with active care and disaster response
Delayed	Yellow	Not in immediate danger of death but treatment needed	Palliative care as required for symptom management
Minimal	Green	Will need medical treatment sometime in the future	Palliative care may be required for relief of symptoms

(Reproduced with permission from Salins et al., 2020)[20]

Table 4: Physical symptom management.

Management of dyspnea[21,22]		
Mild dyspnea (VDS score 1–3)	**Moderate dyspnea (VDS score 4–6)**	**Severe dyspnea (VDS score 7–10)**
Medical management High flow oxygen Positioning (upright, sitting, leaning forward) Cold flannel on the face	Strategies used for mild dyspnea + Oral morphine immediate release 2.5 mg BD-TDS + 2.5 mg SOS. Slow upward titration by 2.5 mg daily up to 40–60 mg/day Oral lorazepam 0.5 mg if anxiety is present. Increase by 0.5 mg daily up to 4 mg/day	Strategies used for mild dyspnea + Inj. morphine 2 mg iv Q4H + Inj. midazolam 2 mg SC Q4H Inj. morphine 10–15 mg + Inj. midazolam 10–15 mg as a 24 h infusion
Management of delirium and agitation in patients with serious COVID-19 infections[23,24]		
Mild delirium	**Delirium with agitation**	**Agitation/restlessness without delirium**
Non pharmacological: Quiet room Less visual/auditory excitation Bed by the side of window Reorientation techniques Consistency of the nursing staff Avoiding physical restraints Pharmacological: Oral haloperidol 0.5 mg BD and titrate dose upward to a maximum of 10–15 mg/24 h Avoid benzodiazepines if possible	Non-pharmacological strategies for mild delirium + Pharmacological: Inj. haloperidol 2.5 mg IV Q6H-Q8H Inj. haloperidol 5–10 mg/24 h continuous IV infusion If agitation not controlled add Inj. midazolam 2 mg IV Q4H or as continuous IV infusion 10–15 mg/24 h	Mild symptoms: Non-pharmacological strategies used for mild delirium + relaxation therapies if possible Tab. lorazepam 0.5 mg HS titrated by 0.5 mg up to 4 mg Severe symptoms: Inj. midazolam 2 mg SC/IV Q4H or as continuous SC/IV infusion 10–15 mg/24 h
Managing respiratory secretions[25]		
Non-pharmacological management		**Pharmacological management**
Optimizing hydration Judicious use of parenteral hydration Avoiding oropharyngeal suctioning Preventing aspiration Lateral recumbent position head slightly raised		Inj. glycopyrrolate 0.2 mg Q8H to Q6H IV if severe 0.8 to 1.4 mg/24 h in divided doses or as a continuous IV infusion over 24 h
Management of pain in patients with COVID-19[22,26]		
Mild pain (NRS: 1–3)	**Moderate pain (NRS: 4–6)**	**Severe pain (NRS: 7–10)**
Oral paracetamol 2–4 g/24 h in four divided doses If patient is not taking orally Inj. paracetamol 2–4 g/24 h in four divided doses If neuropathic pain is present Start gabapentin 100 mg HS and upward titration by 100–300 mg/24 h to a maximum of 2700–3600 mg/24 h Avoid NSAIDs	Strategies used for mild pain + Oral morphine immediate release 5 mg Q4H and breakthrough dose is 1/6th the 24 h dose. Upward titration by 50% of dose everyday If patient unable to take orally Inj. morphine 1–2 mg IV every 4 h Consider fentanyl if patient has renal failure. Fentanyl dose is 0.2–0.5 mcg/kg/h	Strategies used for mild pain + Inj. morphine 2–2.5 mg iv Q4Hr/ Inj. morphine 10–15 mg as a 24 h infusion Consider fentanyl if patient has renal failure. Fentanyl dose is 0.2–0.5 mcg/kg/h Other strategies for managing constipation if patient is unable to take oral bisacodyl

3. Reassure the family and patients
4. Assess need for information and elicit concerns
5. Deliver information with empathy
6. Acknowledge and validate emotions
7. Address anger and explore reason. Call for help if the patient/caregiver is violent/agitated or in the presence of a mob.

Skills for communicating in times of crisis to discuss resource allocation[10,18]

1. Explain the ICMR guidelines for the management of COVID-19
2. Explain what this means to the patient – Talk about what you will do first and then what you cannot do

Table 5: Anticipatory prescription at end-of-life.[19]

Symptom anticipated	Treatment plan
Pain	Inj. morphine 1–2 mg IV/SC sos or q4h
Breathlessness	Inj. morphine 1–2 mg IV/SC sos or q4h
Distress/agitation	Inj. midazolam 1–2 mg IV/SC sos or q4h
Delirium	Inj. haloperidol 1–2 mg IV/SC sos or q4h
Delirium with severe agitation	Inj. haloperidol 1–2 mg IV/SC + Inj. midazolam 1–2 mg IV/SC sos or q4h
Respiratory secretions	Inj. glycopyrrolate 0.2 mg IV/SC sos or q4h
Nausea and vomiting	Inj. metoclopramide 20 mg IV/SC sos or q4h

3. Assert what care you will provide
4. Respond to emotion
5. Reassure that there is no bias for any patient and same protocol applies to everyone.

Loss, grief, and bereavement

Patients and families diagnosed with COVID-19 experience a profound sense of loss. Most of them are unprepared for the rapid deterioration in health. This is coupled with other losses such as the sense of security, livelihood, financial security, personal freedom, and support systems. Grief is the response to the event of loss. Bereavement is the loss experienced due to the death of a loved one. Family members who are unable to be at the bedside of their dying patients or see them one last time may experience feelings of guilt and remorse. Loss, grief, and bereavement can be complicated in critically ill COVID-19 patients and their families. Attending to this distress in an important component of palliative care service provision.

Steps to handle grief and bereavement[18]

1. Recognize distress
2. Recognize grief
3. Rule out psychiatric morbidity
4. Initiate grief interventions - Supportive psychosocial and grief interventions
5. Referral to mental health experts in case of complicated/difficult grief.

Psychosocial distress

Patients with COVID-19 and their families are likely to experience increased distress from the time of diagnosis, during quarantine/isolation, when the patient becomes symptomatic, or when the illness worsens and finally leads to death. The psychological morbidity can start immediately or can develop later. What is known is that the mental health effects of the pandemic extend beyond the period of the pandemic leading to short-term and long-term psychiatric morbidity. Patient/families seeking palliative care in this situation are likely to be in extreme distress and assessing and managing distress is an important part of palliative care service provision.[10]

Pathway for assessing psychosocial distress involves following steps

1. Screening for distress
2. Explore current concerns
3. Evaluate risks
4. Assign risk stratification to appropriate therapy.

Managing of psychosocial issues in critically ill patients with COVID-19 and their families

Psychoeducation which involves giving honest information in simple and accurate messages, avoiding false reassurances, maintains a calm behavior while sharing information with groups of affected people, families are an important aspect of psychosocial care. Support to enhance coping includes providing reassurance, facilitating ventilation and validation of feelings, helping normalize anger and grief, and promoting realistic hope and goal setting. Psychotherapeutic techniques such as cognitive restructuring, relaxation techniques, yoga, mindfulness, problem-solving therapy, and social skills training have proven efficacy in crisis situations. Addressing spiritual distress by reestablishing connectedness, therapies to foster meaning and purpose at end-of-life like dignity conserving care and therapy, meaning-centered psychotherapy, acceptance, and commitment therapy enhance well-being at end-of-life.[19] Pharmacological management is indicated in the presence of psychiatric illness along with supportive therapy. Drug of choice for anxiety and depression is selective serotonin reuptake inhibitors such as escitalopram 10–20 mg/day or sertraline 50–200 mg/day. In COVID-19, patients may experience panic, insomnia, and anxiety due to diagnosis, uncertain disease course, fear, and stigma of the disease. In such patients' shorter-acting benzodiazepines like lorazepam, 1–2 mg can be prescribed. However, care should be taken to taper and stop the same once the patient is better, as benzodiazepines have addictive potential. Agitation, psychotic episodes, and delirium could be managed with antipsychotic medications such as haloperidol 2.5–5 mg/day or olanzapine 5–10 mg/day.[10,18]

CONCLUSION

COVID-19 pandemic has emerged as a global health threat causing socioeconomic and health-care crisis worldwide. Triaging of COVID-19 patients with serious illness who are not eligible for mechanical ventilation or those patients who are not responding to ventilation is important. In these

patients, withholding or limiting life-sustaining treatment is indicated and provision of adequate symptom control and end-of-life care is considered appropriate. Integration of palliative care in COVID care pathway is essential for decision making, symptom management and end of life care including bereavement.

Declaration of patient consent

Patient's consent not required as there are no patients in this study.

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Conflicts of interest

There are no conflicts of interest.

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