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Conservative management of Covid-19 patients – emergency palliative care in action

Fusi-Schmidhauser Tanja¹, Preston Nancy², Nikola Keller¹, Gamondi Claudia¹

¹ Palliative and Supportive Care Clinic, Institute of Oncology of Southern Switzerland and Ente Ospedaliero Cantonale, Switzerland

² International Observatory on End of Life Care, Lancaster University, Lancaster, LA1 4YG, United Kingdom

Background

Covid-19 is rapidly spreading across the world. Many patients will present with a high symptom burden, which specialists in palliative care can help manage. Whilst the focus in the media has been on mechanical ventilation, increasing numbers of patients will not be suitable for this support due to underlying health conditions. Instead, they will require a conservative approach and palliative care management.

After two weeks of caring for inpatients with Covid-19 in a Swiss hospital near Northern Italy, treatment plans have changed dramatically. In part, this is due to competition for palliative care drugs, which are also used in ICU. But these changes are also staffing-related. Healthcare workers are re-allocated from their own specialities to care for patients with Covid-19 and palliative care is new to them. Hence, palliative care assessment and treatment recommendations need to be clear and simple to enact, to achieve maximum palliation of symptoms. In addition, our decision-making needs to be rapid, as patients are likely to deteriorate quickly. This is emergency palliative care. In this paper, we describe the management plan for three types of patients who are not suitable for ventilation: stable, unstable, or at the end of life.

Categorisation of patients

We use early warning parameters¹ to assess patients with Covid-19, as recommended by the WHO². In addition, patients with a respiration rate of over 25 per minutes and saturations of <88% (irrespective of supplemental oxygen therapy), are categorised in the unstable category. As these patients deteriorate they will be categorised as end of life.

Assessment and treatment

Assessment needs to be concise and quick as patients can deteriorate rapidly. Assessment guidelines and treatment plans for patients who are not suitable for life-sustaining therapies need to be shared with emergency department staff in particular, as patients present there and palliative care teams may not be able to assess in time. Assessments are tailored to the additional time required because of limited contact due to infection control nursing requirements and reducing risk of contamination³. A Covid-19 specific assessment tool was developed locally, the 3D-Ticino 2019-nCov Score (3D-TiCoS), which focusses on key symptoms observed in this population, such as dyspnoea, distress and discomfort (pain). The tool is depicted in Figure 1. Pressure areas are also assessed and the need for pressure relieving devices.

Our medication guidelines are based upon the limitations in resources, particularly the availability of midazolam and fentanyl, and are presented for each category of patient in Table 1. Each country will have their own preferred route of administration, dose and second line drugs and initially greater drug availability. Consider using oral and rectal routes of administration, especially in care homes or

the community. In all cases, non-essential pharmacological treatments such as statins are temporarily stopped in order to prevent potential interactions with experimental COVID-19 disease-related therapies *Stable Patients*

Stable patients, although not suitable for intubation, may still recover. They have a high symptom burden including dyspnoea, fever, anxiety and shivering. They have their EWS and the 3D-TiCoS assessment recorded each nursing shift. Pulse oximetry is more useful than listening to the chest, as some non-dyspnoeic patients are still hypoxic and reduces risk of contamination. Dyspnoea can be persistent or intermittent and managed with morphine.

Fever leads to excessive shivering which causes discomfort. Shivers can be managed with morphine and in some cases pethidine has been used.

Anxiety is high as patients are nursed in isolation and the diagnosis of Covid-19 is received as a 'death sentence'. Lorazepam is helpful. Families also have high anxiety as they have minimal contact. In some hospitals, one visit is permitted in exceptional situations but it is time consuming to dress families in PPE and risks greater contamination. This is difficult if families are in quarantine or unwell themselves. All families are told the patient is 'sick enough to die'⁴. Virtual visits have been possible. Chaplains take the lead on supporting and informing families.

Unstable Patients

A patient may present as unstable or deteriorate and become unstable. Deterioration can be rapid. Unstable patients are categorised by an increase in the Early Warning Score (EWS) to over 7 and decreased saturation levels below 88% irrespective from supplemental oxygen. These patients are not going to recover and need their symptoms managed. Some hydration is given to keep the patient comfortable, as well as mouth care. The family needs to be informed of the change in situation and it may be possible to arrange a visit. Visits are kept short (about 15 minutes) to reduce infection risk⁵

End of Life Patients

These patients have very low saturation levels and are dying. If the patient is unable to communicate each shift their restlessness, shivering (hyperthermia), distress, tachycardia and tachypnea are assessed (ABDT₂ from Italian Agitazione, Brividi (ipertermia), Distress, Tachicardia e Tachipnea). Delirium is problematic, especially in combination with dementia, as it increases the contamination risk. Patients need sedation but due to limitations in availability of midazolam, creative solutions are employed using diazepam, chlorpromazine and levopromazine. Sedation is also used in the presence of haemoptysis, but haemoptysis is only experienced by a minority of patients⁶. Oxygen therapy and other futile treatments are stopped, and comfort care given. Oxygen in this context is not helpful to palliate symptoms, as it does not improve hypoxic patients' comfort, rather opioids are more effective⁷. In addition the mask can cause discomfort especially for patients with delirium. If possible a visit from the family is arranged. We would not recommend virtual contact with families using Skype or another online system as our experience is at this point as they find it too distressing.

Conclusion

Palliative care teams, intensivists and internal medicine specialists all work side by side as palliative care is recognised to be at the forefront of this crisis, as it can offer symptom management, support to families and spiritual care. Most patients with Covid-19 need palliative care input due to the large symptom burden and need for clear and open communication with patients and their families. However, due to the potential for rapid deterioration, decisions need to be made quickly, and

treatment plans need to be clear and simple to follow for the generalist staff caring for them. Care of patients with Covid-19 results in huge ethical dilemmas and a toll on the health care teams caring for them, not least from shortages in resources, both staffing and pharmaceutical. Palliative care needs to adapt to an emergency style of palliative care and be at the forefront to help make the best decisions, give care to families and find spiritual support.

References:

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Table 1: Recommendations for conservative and palliative care management of Covid-19 patients

Phases of illness	Monitoring (nursing)	Drugs for symptom control
Stable: EWR ¹ : ≤ 7 RR: ≤ 25/min O2 Sat: > 88% (with Venturi mask up to 60%)	<ul style="list-style-type: none"> •  assessment and vital signs once per shift • Evaluate pressure areas & need for pressure relieving mattress • Intensify communication with the family and prepare that sick enough to die 	<p>Dyspnea/pain: Morphine orally 2-5 mg, 4 hrly with rescue doses (10% of the total daily dose) or PRN</p> <p>Anxiety: Lorazepam sub-lingual 1-2.5 mg, 8 hrly or PRN or Levomepromazine PO 7.5 mg PRN</p> <p>Fever: Paracetamol PO 1 g or rectal 600 mg, 6 hrly or PRN</p> <p>Shivers: Morphine 2-5 mg PO PRN or Pethidine 25 mg SC PRN</p> <p>Prescribing in Renal Insufficiency and opioids: choose Hydromorphone (accordingly to palliative care consultation) Temporary de-prescribing of usual drugs</p>
Unstable: EWR ¹ > 7 RR: > 25/min O2 Sat: < 88%	<ul style="list-style-type: none"> •  assessment twice per shift if patient alert • O2 delivery max. 4 L • Observe respiratory effort • Inform the family now terminal and propose visit 	<p>Dyspnea/pain: Morphine IV/SC 5 mg, 4 hrly with rescue doses (10% of the total daily dose) or PRN</p> <p>Anxiety/delirium/distress: Diazepam 2.5-5 mg IV or rectal 10 mg 8-12 hrly with rescue doses PRN or Chlorpromazine 12.5-25 mg IV PRN or Levomepromazine 6.25-12.5 mg SC PRN</p> <p>Fever: Diclofenac 75 mg IV PRN (max. BD) or Paracetamol rectal 600 mg PRN (max. 4/day)</p> <p>Shivers: Morphine 5 mg IV PRN or Pethidine 25 mg SC PRN</p> <p>Hydration max. 250 ml/day Suspend futile treatments</p>
End-of-Life: ARDS	<ul style="list-style-type: none"> •  assessment twice per shift if patient alert 	<p>Terminal dyspnea – Respiratory distress:</p> <ul style="list-style-type: none"> • Morphine IV/SC 5 mg, 4 hrly with rescue doses (10%

O2 Sat: < 70%

- Assess ABDT₂ once per shift if patient does not communicate
- Stop O2
- Inform the family and re-evaluate for family visits
- Basic care and mouth care

of the total daily dose) or PRN

- Diazepam 2.5-5 mg IV or rectal 10 mg 8-12 hrly with rescue doses PRN

Hyperactive delirium:

- Diazepam 2.5-5 mg IV or rectal 10 mg 8-12 hrly with rescue doses PRN
- Chlorpromazine 12.5-25 mg IV PRN or Levomepromazine 6.25-12.5 mg SC PRN

Fever: Diclofenac 75 mg IV PRN (max. BD) or Paracetamol rectal 600 mg PRN (max. 4/day)

Shivers: Morphine 5 mg IV PRN or Pethidine 25 mg SC PRN

Abbreviations:

- EWR¹: Early Warning Score and Rules for 2019-nCov Infected Patients
- RR: Respiratory rate
- O2 Sat: Saturazione ossigeno
-  Dyspnea, Distress, Discomfort/Pain (from Italian: Dispnea, Distress, Dolori)
- Vital signs: blood pressure, oxygen saturation, pulse, body temperature
- ABDT₂: agitation, shivering (hyperthermia), distress, tachycardia and tachypnea (from Italian: Agitazione, Brividi (ipertermia), Distress, Tachicardia e Tachipnea)

Figure 1: 3D-Ticino 2019-nCov Score (3D-TiCoS)

