

Medical reasons for hospitalisation of advanced cancer patients during their last three days

Studies have shown that many patients prefer to die at home, in a familiar environment surrounded by family and friends.^{1,2} Traditionally, 'dying peacefully in one's bed in the main hall of the house' is considered a good death by the Chinese.³ However, social circumstances, such as financial strains and an inadequate level of caregiver support, might impair the family's ability to take care of the terminally ill patient at home.⁴ Even when social circumstances allow, the patient might be admitted to hospitals for medical reasons, such as symptom control, investigations and nursing care, and might subsequently die there. With the development of multi-disciplinary domiciliary palliative care, pain and symptoms can often be alleviated at home. Indeed, registration in a palliative care programme has been shown to be a predictor of out-of-hospital death.⁵ Nevertheless, most patients in Hong Kong, including advanced cancer patients, still die in hospitals. It is worth exploring the medical reasons for hospitalisation, which may guide future service development in palliative care so as to facilitate more patients to die at home if they so wish.

The medical records of patients who died during the period from 13 December 2003 to 31 March 2004 in the Palliative Medical Unit, Grantham Hospital were reviewed. Investigations and interventions during the last 3 days that required hospitalisation, and their indications, were recorded. These are considered the medical reasons that might have prevented the patients from dying at home.

Records of 109 patients (47 males, 62 females) were reviewed, with a male to female ratio of 1:1.3. The mean age of the patients was 65.7 (range, 29-98) years. All the patients died of malignancies. Medical reasons that required hospitalisation, and therefore, might have prevented the patients from dying at home included laboratory, radiographic, and other investigations, invasive procedures, parenteral medications, other nursing procedures, and oxygen therapy. These investigations and interventions, and their indications, are shown in the Table.

If all these procedures and interventions had to be performed in the hospital, only 10 (9%) of the 109 patients would have been able to die at home even if social circumstances had allowed. Some of these barriers can, however, be overcome. Further development of domiciliary palliative care—focusing on education of the patients and their family members on blood glucose monitoring, oxygen therapy, subcutaneous injections, and the use of syringe drivers—might enable more dying people to remain at home. With better laboratory support to domiciliary palliative

Table. Investigations and interventions on patients in their last 3 days that might require hospitalisation

Investigation/intervention	Patients No. (%)
Investigations	
Laboratory investigations: indications	21 (19)*
Sepsis workup	6
Fatigue/lethargy	5
Dehydration	5
Gastro-intestinal bleeding	5
Delirium	2
Follow-up of previously diagnosed abnormality, such as electrolyte disturbance or neutropenia	11
Radiographic examinations: indications	15 (14)
Dyspnoea	12
Haemoptysis	1
Suspected pneumonia	1
Intestinal obstruction	1
Blood glucose monitoring: indications	14 (13)
Diabetes mellitus	7
Recurrent hypoglycaemia	3
Dextrose insulin drip for hyperkalaemia	2
Hepatic encephalopathy	2
Electrocardiography: indications	7 (6)
Dyspnoea	4
Heart failure	1
Pericardial effusion	1
Hyperkalaemia	1
Echocardiography: indication	1 (1)
Pericardial effusion	1
Interventions	
Oxygen therapy: indication	78 (72)
Dyspnoea with hypoxia	78
Intravenous medications: indications	35 (32)
Antibiotic therapy for pneumonia	16
Fluid replacement for dehydration	7
Hypercalcaemia	3
Hyperkalaemia	3
Hypoglycaemia	3
Hypokalaemia	1
Gastro-intestinal bleeding	1
Intravenous dexamethasone for brain secondaries	1
Continuous subcutaneous infusion of medications: indications	29 (27)
Pain	19
Dyspnoea	6
Intestinal obstruction	4
Other nursing procedures	17 (16)
Nasogastric tube feeding	6
Blood pressure monitoring for gastro-intestinal bleeding, abdominal paracentesis or pericardiocentesis	5
Bladder irrigation	3
Respiratory rate monitoring for morphine overdose	1
Care of chest drain	1
Wound dressing	1
Pericardiocentesis	1 (1)
Pleural fluid drainage	1 (1)
Abdominal paracentesis	1 (1)

* Some patients had more than one indication

care, home-care nurses could take blood and other samples at home and send to the hospital laboratory, so that termi-

nally ill patients might not be required to enter the hospital for these investigations. If all these procedures could be performed at home, 54 (50%) of the 109 patients might be able to spend their last days and hours at home if social circumstances allow and if they so wish. However, the remaining 50% would still require hospitalisation, due to requirements of radiographic and other investigations, intravenous therapy, other nursing procedures and/or invasive procedures.

MK Sham, FRCP, FHKAM (Medicine)
(e-mail: shammk@ha.org.hk)
Palliative Medical Unit, Grantham Hospital, Hong Kong

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