

are also available in alerting clinicians to timing and need for palliative care, especially in older patients.³

Evidence for benefit of early palliative care is emerging for structured palliative care services for HF. The PAL-HF randomised controlled trial shows that an interdisciplinary palliative care can yield greater benefits in quality of life, anxiety, depression, and spiritual well-being compared with usual care alone.⁴ Challenges in withholding or withdrawing care options like with non-invasive ventilation, implantable defibrillators, left ventricular assistive devices will need to be further addressed. Serious illness conversation guide from Harvard University is available also in local Hong Kong Chinese setting to facilitate discussion.⁵

Good HF care necessitates an integrated care programme, with palliative team working hand in hand with cardiologists.

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12 CHALLENGES IN SHOCK MANAGEMENT IN THE EMERGENCY DEPARTMENT

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The diagnosis and emergency management of patients with shock (poor end organ perfusion with reduced tissue oxygen delivery, usually associated with systolic hypotension) is difficult even in optimum circumstances. The challenge is multiplied when patients have to be managed in overcrowded and poorly resourced emergency departments (ED).

In Hong Kong, public hospital EDs manage over two million patient attendances annually, equivalent to 30% of Hong Kong's population. Around 30% of ED patients require emergency hospital admission, with the majority being more than 80 years old. Hong Kong's ageing population, with its associated comorbidities and polypharmacy, has inevitably contributed to rising numbers of critically ill ED patients in recent years.

Shock is a major cause (and consequence) of critical illness in ED patients. Hypovolaemic shock is frequently secondary to gastrointestinal bleeding and trauma; septic shock is increasingly common due to better recognition in the ED and more patients with chronic immunosuppression. Cardiogenic shock is common, usually due to acute myocardial infarction. Optimum treatment for these patients is undoubtedly emergency revascularisation by primary percutaneous coronary intervention (PCI).

Hong Kong currently does not have a regionalised or coordinated PCI service and this may contribute to the poor outcomes seen in elderly patients with cardiogenic shock. Increasingly, patients with acute on chronic heart failure often

present with shock and require a coordinated specialist approach at the earliest opportunity to improve outcomes.

Comprehensive collaboration between emergency medicine physicians, cardiologists, cardiothoracic surgeons and critical care services and shared clinical management are vital to optimise patient outcomes.

13 THE SHOCK TEAM APPROACH: THE RATIONALE AND EVIDENCE

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Cardiogenic shock (CS) is defined as a state of ineffective cardiac output caused by a cardiac disorder that results in both clinical and biochemical manifestations of inadequate tissue perfusion.¹ Among patients presenting with CS, there is a spectrum of disease whereby some patients can be stabilised with pharmacologic interventions alone, while others require escalation to mechanical circulatory support (MCS).² As patients and treatment options both become increasingly complex, comprehensive critical care may be best delivered in disease-specific service line ICUs.² The model of the cardiac ICU has transitioned over time from one focused on electrocardiographic monitoring for early identification and termination of peri-infarct arrhythmias, to units experienced with invasive haemodynamic monitoring and management of percutaneous/surgically placed MCS devices for the treatment of CS. Early recognition of shock is vital to improving outcomes, and in-hospital survival for CS has been observed to be reduced in patients who are more rapidly supported with MCS.³ Integrating dedicated intensivists into ICU teams has therefore not surprisingly been demonstrated to improve survival in critically-ill patients.⁴ Furthermore, survival for CS may be better when treated at specialised centres with greater experience compared to centres with lower annual volume of shock cases.⁵ Contemporary, comprehensive cardiac critical care includes multidisciplinary teams with expertise in MCS, pharmacotherapy, mechanical ventilation, renal replacement therapies, and palliative care. Shock teams have necessarily expanded beyond a given institution to incorporate networks of centres, such that highly specialised care is centralised at quaternary referral centres with resources and expertise to manage this complex condition.

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