

Critical care for patients with potentially fatal haematological disorders

Critical care beds in South Africa (SA) are a scarce and precious resource.^[1] Allocation of resources to patients with the highest likelihood of survival is a common practice with severity of disease and likelihood of a successful ICU outcome, being carefully weighed up.^[1-3] Patients with solid organ-malignancies are often excluded from ICU except in rare acute life prolonging situations, for example bowel obstruction surgery. Patients with haematological malignancies have traditionally had very poor ICU outcomes, if needing admission for organ support.^[4] The outcomes depend on the type of malignancy and requirement for organ support, such as dialysis or ventilation, particularly if neutropenic sepsis or chemotherapy complications are present.

The Critical care unit at the Universitas Academic Hospital – University of Free State in Bloemfontein, conducted a review of haematological patients requiring admission to their ICU. This study provides important information to assist clinicians in the triage process for a very scarce resource.^[5]

Over a 10-year period, 182 patients were admitted with a haematological malignancy: ~one and a half per month. The researchers specifically looked at those with neutropenic fever as a result of their underlying treatment. What is not known is how many were referred and not admitted, nor the criteria that the attending ICU consultant on duty used to make the decision to admit or not. It requires, in my experience, often a lengthy discussion between the oncologist/haematologist and the intensivist, in order to understand the underlying malignancy, the medium-to-long-term prognosis (often a point of contention), and the specific needs of organ support in the ICU.

A third of admissions had neutropenic sepsis, >86% needing vasopressors with a median SOFA score of 10. Twelve of the 51 patients survived the ICU admission but only 9 (17.6%) were discharged home, alive. In this very ill group of patients with high organ failure scores, the outcomes would be considered dismal in any general ICU. A recent multicentre study evaluating ICU outcomes in KwaZulu-Natal reported an overall ICU outcome of 19.7% mortality.^[6] Therefore, we have to balance an expected outcome of ~20% chance of mortality v. 20% chance of survival. In the COVID-ICU the survival-to-hospital discharge was 30%, but the competition for beds/triage system was not with those with an expected higher survival chance, but among those with the same disease.^[7]

There are many challenges in the decision process of 'to admit or not: The 'average' or 'median' survival of 17.6% applies to the whole group, and not the 9 individual patients who did survive, any of whom may be standing in front of the attending doctor. On any given day, the

doctor may have no other admissions competing for the same bed; but once the resource has been used, it can not be used for anyone else. The challenge remains that without guidelines or national consensus triage agreements, each patient is at the mercy of the day, the clinician and the centre that they present to.

There is no quick solution to these challenges, but 'giving a patient a chance' today with an 80% chance of death, even if only for a short stay, may preclude someone tomorrow who has an 80% chance of survival if admitted to the ICU. Rational, consultative decision-making, and guideline-based triage is required to assist clinicians who make these life-and-death decisions, often in the face of family and referring clinician pressure. However, if the chance of survival is low, as in the data presented, the cold light of day reality is that precious resource allocation should trump personal/clinician feelings and vested interest.

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