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Slaying the Sacred Cows: Intensive Care Diagnoses

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Introduction

British Intensive Care Medicine has come of age! The specialty is increasingly developing the apparatus to become an independent speciality. These aspirations cannot solely rely upon a new training program, faculty and exam.
A true revolution in Critical Care must include fundamental changes to clinical practice. Here, I argue for a move away from conceptualising pathologies as broad, non-descript "Critical Care syndromes" and encourage development of discerning nomenclature as the alternative.

Argument

Common Intensive Care "diagnoses" exist in one of three forms:

1. pathologies borrowed from other disciplines, often prefaced with "severe-", for example severe-pneumonia,
2. identification of an organ system requiring support, suffixed with "-failure", for example respiratory failure,
3. Or, the clustering of clinical features into Critical Care syndromes, such as ARDS, sepsis, critical illness acquired polyneuromyopathy and SIRS.

Organ-failure and syndromes are useful terminologies – to a point. They describe which organs require support and group common sets of clinical features, respectively. These labels provide a common language. Each label sign-posts a particular set of treatment strategies – up to this point this vocabulary is useful.

However, the language of Critical Care syndromes is of little help in identifying causative factors. Pre-existing cardio-respiratory disease, advanced age, alcohol dependence, prolonged hypotension, and poor fluid management, among others are invariably quoted as risk factors for the development of any number of critical care syndromes. It is arguable that these characteristics describe the majority of ICU admissions.

The quality of evidence supporting management of specific syndromes is variable. On one hand, there are few therapies successfully described to treat critical illness acquired polyneuromyopathy. On the other, sepsis syndrome is perceived to have good quality evidence-base to guide management. Nonetheless, sepsis-specific treatments are slow to enter clinical practice – once promising treatments have been withdrawn. Sub-groups of patients appear to benefit from certain treatments – because sepsis, as we currently describe it, is not a discreet diagnosis, but a description of a shared final common pathway. Similarly, in critical illness acquired polyneuromyopathy, it is not the pathology, but the symptom that provides the overriding commonality. It is imperative that the labelling of disease groups is done in a clinically meaningful manner that supports development of novel therapies.

The utility of defining syndromes through consensus-based scoring systems must also be questioned. These definitions are removed from clinical practice. Syndromes such as sepsis and SIRS are wide churches, where as ARDS necessitates measuring left atrial pressure. The broader definitions discourage consideration of a full differential; narrow definitions result in labelling, without the patient fulfilling all criteria. In either case, a lack of diagnostic precision abounds.

Conclusion

The current sets of syndromes have served their purpose. In much the same way the ICTBICM, DICM and Joint CCT have been surpassed in the evolution of critical care, syndromes must follow suit. In becoming a Sacred Cow, the persistence of syndromes will stifle progress in critical care – the cow must be slaughtered!