Severity-of-illness assessment in community-acquired pneumonia

We believe the authors of the 2009 update of the guidelines for the management of community-acquired pneumonia have confused mortality predictors with severity-of-illness scores. They state ‘we have concentrated only on studies that have used mortality as the main outcome measure’. We recognise that there are difficulties in using intensive care admission as an outcome measure because of variation in admission criteria. However, 30-day survival of patients with low mortality predictor scores does not mean they were not severely ill, merely that they were treated aggressively despite their ‘low risk of death’.

CURB-65 does not perform well in predicting the need for critical care compared with predicting 30-day mortality. When judged on this outcome it does not perform as well as a modified Early Warning Score. Although the authors advocate use of CURB-65 in conjunction with clinical judgement, they use as an example: ‘the combination of age < 50 years, absence of coexisting disease and a CRB65 or CURB65 score of 0 to identify patients with a good prognosis who should be suitable for home treatment’ (our italics).

We would draw their attention to a hypothetical 50-year-old with legionella pneumonia whose pulse is 140, SaO₂ (arterial oxygen saturation) 90% with FiO₂ (fractional inspired oxygen) 0.8 but whose respiratory rate is only 28 and is compensating so that systolic blood pressure is 94, and is not yet confused or uraemic. This patient is clearly ill, and may meet the criteria for early goal-directed treatment but ‘should’ be manageable at home. Conversely, many nursing home patients are over 65, chronically confused with chronically raised urea, necessitating, according to the guidance, ‘urgent hospital admission’ for even the mildest chest infection.

The caveat requiring clinical judgement in addition to CURB-65 must call into question the fitness for purpose of the tool. The guidelines recognise in section 6.2 the multiplicity of physiological and social factors predictive of poor outcome; why then recommend an assessment tool which fails to include these? Most acute hospitals now use some form of Early Warning Score in accordance with National Institute for Health and Clinical Excellence (NICE) guidance on the management of the acutely ill patient and they have been widely validated in different patient sets.

We recognise the difficulties in constructing guidance to cover a wide range of presentations, but would welcome more insight into the risks of conflating mortality risk with severity of illness.

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