COPD Exacerbations: Do All Roads Lead to Rome?

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To the editor,

The Rome COPD Exacerbation proposal is a welcome step forward (1). Prof Celli and colleagues have attempted to revise the definition and propose a new severity classification, based on measurable clinical and laboratory variables instead. The central role of health care utilisation when defining exacerbations has held us back from a better understanding of these critical events.

We agree that it is appealing to direct the definition of an exacerbation towards causation and measurable pathophysiological variables instead of symptoms alone (2). We also sympathise with the concept of a genuine exacerbation being an “inflammatory burst”, caused by an “insult to the airways” on a background of chronic inflammation. However, practical implications of narrowing down acute COPD exacerbations to these primary inflammatory events need to be considered. The clinical reality is that we have no universal marker that is specific for this implied inflammatory burst, and that, despite a thorough workup, we still do not identify a cause in many exacerbations (3). At present, exacerbations remain a diagnosis of exclusion Acute exacerbations of symptoms that are induced by comorbidities like heart failure or even a panic attack require a different treatment approach. For patients, however, these events are equally frightening and just as much part of the reality of living with COPD. We feel that the emphasis of the ROME Proposal on the inflammatory paradigm, may shift the focus away from such events. Moreover, in practice, exacerbations of comorbidities and exacerbations of airway inflammation are not mutually exclusive, but often coincide. Rather, we would keep the concept of an acute COPD exacerbation broad. Once a clinical diagnosis of a COPD exacerbation is made, maximal effort should be undertaken to better characterise endotypes and identify treatable traits, instead of contemplating the correct clinical label.

The current method for severity classification is determined by healthcare systems. The ROME proposal instead uses the visual analogue scale (VAS) for dyspnoea, heart rate, respiratory rate, and CRP. The thresholds were derived from observational cohorts of hospitalised patients. However, this lacks specificity as most patients treated in the outpatient setting are also tachypnoeic, tachycardic

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and have a VAS score for dyspnoea greater than 5 (4) and CRP is frequently raised in patients with COPD exacerbations treated in the community (5). Furthermore, in hospitalised exacerbations from the BACE study (6), many patients would not even meet the criteria for a moderate event (figure 1).

Overall, the Rome proposal is a bold step forward to break the mould of our healthcare utilisation-based definition of COPD exacerbations. But more work is needed to continue to improve on this, to define treatable traits of exacerbations. The CICERO programme (7) will capture all exacerbations seen in hospital, inclusive of worsening of co-morbidities, with detailed assessments to determine the above.

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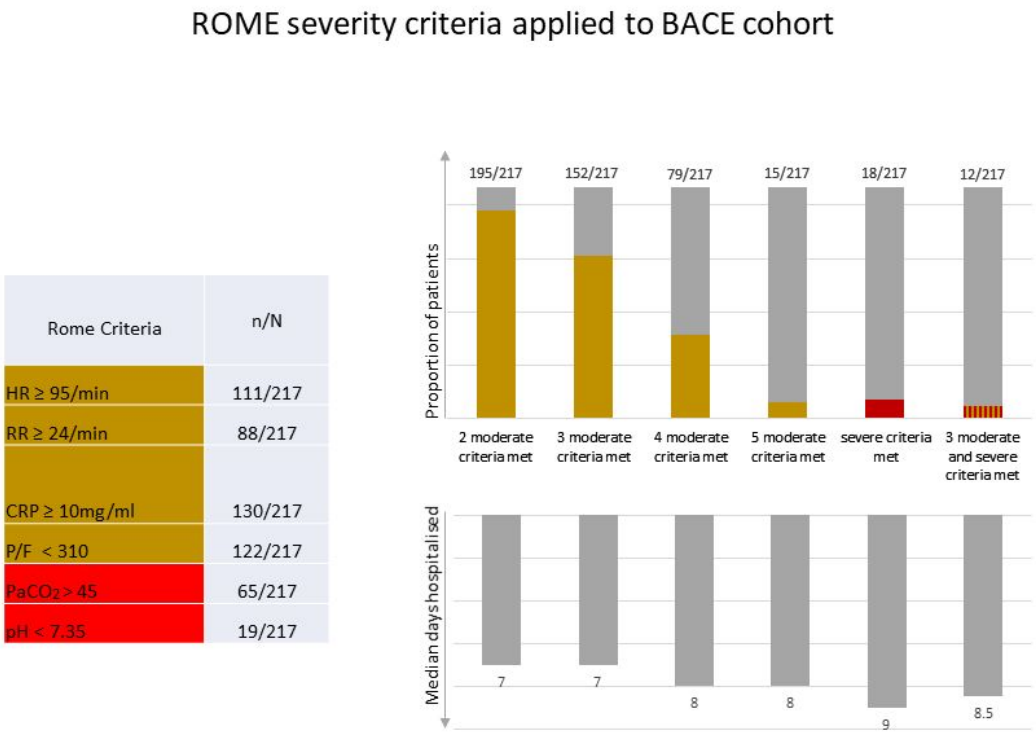

Figure 1: The BACE-cohort consisted of 301 COPD patients hospitalized for an acute COPD exacerbation. The Rome severity criteria could not be assessed in 84 of 301 patients due to missing variables. VAS score for dyspnea was not available in the BACE-cohort, but was assumed to be ≥5 in all patients. Saturation without oxygen was not available for all patients, and was replaced by P/F (PO_2 over FiO_2 ratio) of < 310, which corresponds to 92% saturation at ambient air.

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