

Chronic rhinosinusitis disease control as a metric for guiding treatment

The assessment of Chronic Rhinosinusitis, like any other disease, may involve multiple possible disease manifestations, including subjective patient-reported outcomes, objective disease (e.g. endoscopy or radiographic), and physician-driven (e.g. need for systemic medications). Disease control is often used as a global metric of disease burden and represents the extent to which disease manifestations are within an acceptable range. Achieving control is an important treatment goal. In a major advance, the 2012 European Position Paper on Rhinosinusitis and Nasal Polyps⁽¹⁾ (EPOS2012) proposed criteria for classifying CRS disease control as “controlled”, “partly controlled” or “uncontrolled” based on nasal blockage, discharge, facial discomfort, sense of smell, sleep disturbance, nasal endoscopy and the need for systemic medications. Subsequent studies identified elements, such as nasal symptoms or endoscopic findings, that may be particularly important for specific groups^(2,3). More recently, a study of the two primary stakeholders in determining CRS disease control - patients and physicians - revealed vastly different perspectives⁽⁴⁾; while patients’ assessments of disease control was associated with only the burden of nasal symptoms - in particular nasal obstruction -, rhinologists’ assessment was associated with nasal, sleep and ear/facial discomfort symptoms, as well as the use of CRS-related medications⁽⁴⁾. These findings confirmed and explained the rationale for inclusion for many elements proposed by EPOS2012⁽¹⁾. In this issue, Phillips et al. demonstrate the validity and responsiveness for patient-reported CRS-related systemic medication usage over the prior three months as metrics of CRS disease burden⁽⁵⁾. Prior studies have also shown that CRS-related oral antibiotics and oral corticosteroids usage may reflect distinct elements of the disease, such as lost productivity or asthma exacerbation, independent of chronic symptomatology^(4,6). These results lend credence to the inclusion of need for rescue treatment in any global assessment of CRS, such as CRS disease control.

However, review of previously published studies demonstrates

that different elements of CRS may be deemed important depending on the approach taken^(2-4,7). Which aspects are incorporated into control criteria ultimately will depend on what purpose we would want CRS disease control to serve. An agreement upon the intended utility and purpose for the concept of CRS disease control is necessary before we can rationally, scientifically, and systematically identify the disease characteristics that should be used to assess it.

We propose that CRS disease control should be developed as a global measure that serves as a goal for treatment, and the individual components used to assess control should therefore be elements of the CRS disease process that have direct ramifications on clinical decision-making. In keeping with principles of precision medicine, patients must also play a central role in the development of such metrics, as ‘control’ must also reflect their perspective of living with CRS⁽⁸⁾. Guidelines to define CRS disease control may then represent a major step towards informing and providing guidance for maintenance, escalation or de-escalation of treatment. Development of CRS disease control criteria that could be used to direct treatment in a standardized fashion has the potential to provide broad benefits for the treatment of CRS patients around the world. EPOS 2020⁽⁹⁾ has further revised its criteria for disease control and continues to lead advances in the concept of disease control, but there remains a need for further work in this critical area.



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References

1. Fokkens WJ, et al. European Position Paper on Rhinosinusitis and Nasal Polyps 2012. *Rhinol Suppl* 2012;3;1-298.
2. Snidvongs K, et al. Validity of European position paper on rhinosinusitis disease control assessment and modifications in chronic rhinosinusitis. *Otolaryngol Head Neck Surg*: 2014; 150:479-486.
3. Kohli P, et al. Responsiveness and reliability of the Sinus Control Test in chronic rhinosinusitis. *Rhinology* 2017; 55:39-44.
4. Sedaghat AR, et al. Chronic rhinosinusitis control from the patient and physician perspectives. *Laryngoscope Investig Otolaryngol* 2018; 3:419-433.
5. Phillips KM, et al. Validity of systemic antibiotics and systemic corticosteroid usage for chronic rhinosinusitis as metrics of disease burden. *Rhinology* 2020. 58;3:
6. Phillips KM, et al. Chronic rhinosinusitis exacerbations are differentially associated with lost productivity based on asthma status. *Rhinology* 2018; 56:323-329.
7. Hopkins C, et al. CHronic Rhinosinusitis Outcome MEasures (CHROME), developing a core outcome set for trials of interventions in chronic rhinosinusitis. *Rhinology* 2018; 56:22-32.
8. Pugin B, et al. Patient Advisory Board for Chronic Rhinosinusitis - A EUFOREA initiative. *Rhinology* 2019; 57:331-335.
9. Fokkens WJ, et al. European Position Paper on Rhinosinusitis and Nasal Polyps 2020. *Rhinology* 2020; 58:1-464.