

Editorial

Fear of the Unknown: Can We Help Individuals With a Systemic Autoimmune Rheumatic Disease Deal With Uncertainty?



Gwenda Simons¹  and Marie Falahee¹ 

Unfortunately, not much is certain in systemic autoimmune rheumatic diseases (SARDs). People with a SARD such as systemic lupus erythematosus (SLE) and systemic sclerosis (SSc) are dealing with a chronic, inflammatory, and often unpredictable autoimmune condition that might cause them to experience illness-related uncertainty.^{1,2} In chronic disease, illness-related uncertainty may occur because of ambiguity concerning the state of the illness and the complexity regarding treatment and the healthcare system; the disease course and prognosis may also be unpredictable.³ Further, uncertainty may occur because there is a lack of information about the diagnosis or because available information is probabilistic in nature.

As Wallace and colleagues highlight in this issue of *The Journal of Rheumatology*, individuals with a SARD may experience considerable illness-related uncertainty, especially when the cause of their rheumatic disease or disease progression is unknown, when symptoms are unpredictable and changeable, or when there is a lack of knowledge about treatment options and outcomes.⁴ Patients with chronic disease may further experience uncertainty around the potential effect of their disease on social roles and opportunities, as well as on their ability to work, to perform daily activities, and to pursue favorite pastimes and hobbies.⁵

For individuals with SARD, uncertainty around treatment for their disease may arise from a number of additional factors. There is often scientific uncertainty around the risks and benefits of treatments for SARDs¹ that in turn may influence treatment decisions made by clinicians and patients alike. The fact that it is often unclear how different treatments compare also contrib-

utes to the uncertainty experienced by patients and clinicians. Further, the probabilistic nature of the information patients receive about risks and benefits of the treatment for their condition may contribute to uncertainty.⁶ In addition, although for many SARDs there has been a rapid expansion of treatment options, patients may cycle through multiple sequential therapies with no or only partial positive treatment response. For example, studies of patients with SLE found that around 5% to 6% of patients showed persistent disease activity despite treatment.^{7,8} Not responding to various successive therapies may be another source of uncertainty in patients. Finally, individuals with SARD may experience uncertainty around the extent to which close family members are at risk of developing their condition in the future.⁹

An individual's perception and appraisal of their condition, including their perceptions of uncertainty around their (often unpredictable) disease and treatment, can in turn have a significant effect on their psychological and physical well-being¹⁰ as well as health-related behaviors such as self-care, treatment decisions, and treatment adherence. In their article, Wallace and colleagues⁴ focus specifically on illness-related uncertainty in SARDs and its effects on mental well-being. They highlight how, in the context of illness-related uncertainty, physical symptoms, psychological factors, and behavioral responses together can form a negative feedback loop, which, if not addressed, may lead to both mental and physical health problems. In particular, their research looked at the associations between illness-related uncertainty and depression, anxiety, and illness impact, as well as psychosocial needs in individuals with a SARD. They investigated the consequences of uncertainty in 3 different SARDs, namely antineutrophil cytoplasmic antibody-associated vasculitis, IgG4-related disease, and SSc. Each of these SARDs puts patients particularly at risk of the harmful effects of uncertainty, given the complexities of care for these conditions and the presence of physical symptoms that may be transient, unpredictable, or do not have a clear cause. The researchers found a significant

¹G. Simons, Research Fellow, PhD, M. Falahee, Lecturer, PhD, Institute of Inflammation and Ageing, University of Birmingham, Birmingham, UK.

The authors declare no conflicts of interest relevant to this article.

Address correspondence to Dr. G. Simons, Rheumatology Research Group, Institute of Inflammation and Ageing (IIA), Queen Elizabeth Hospital, University of Birmingham, Birmingham, B15 2WB, UK.
Email: g.simons@bham.ac.uk.

See Uncertainty and rheumatic diseases, page xxx

and positive relationship between illness-related uncertainty and depression, anxiety, and disease impact across the various SARDs they investigated.

There is a need to educate and provide patients with strategies to cope with illness-related uncertainty in chronic conditions in general,^{6,11} and it seems that patients with unpredictable systemic rheumatic diseases would welcome such support. Wallace and colleagues observed strong interest among their participants with SARD in interventions to address their mental health needs, especially in those who reported greater illness-related uncertainty, depression, and anxiety.⁴ They highlight the importance of developing interventions that reduce the negative psychological effect of uncertainty and improve quality of life in individuals with a SARD.⁴ As they point out, to date, very few studies have evaluated interventions for the management of illness-related uncertainty in persons with SARDs, although there are success stories in other disease areas.^{12,13} There is further evidence from other disease areas that depression and anxiety as a result of illness-related uncertainty might in turn lead to treatment nonadherence.¹⁴ Effective interventions that help patients manage disease-related uncertainty may therefore not only improve mental health and quality of life but also indirectly increase treatment adherence and improve physical health.

Such interventions should help individuals with a SARD not only deal with the commonly accepted uncertainties around their disease and the treatment of their disease but also address other disease-related uncertainties, including the potential risk of close family members developing the disease. Patients need both clear information about this potential risk as well as support in communicating to their relatives about this risk.

When developing an intervention for individuals with a SARD to deal with illness-related uncertainty, there are a number of things to consider, including how information about the disease is communicated to patients, and in particular, information relating to uncertainty around treatment risks and benefits. On the one hand, effectively communicating information about treatment benefits and risks and the scientific uncertainty around those estimates empowers patients and facilitates shared decision making. On the other hand, conveying uncertainty around risk and benefit estimates might also increase illness-related uncertainty and anxiety. For example, treatment preference research from Bansback and colleagues¹⁵ showed that communicating scientific imprecision around the risks and benefits of rheumatoid arthritis treatment led to small but significant increases in decision uncertainty for treatment choices. There is considerable variation in how such uncertainty around risks and benefits is communicated and further research is needed to identify effective approaches.¹⁶

Politi and colleagues suggest that the interpretation of and responses to uncertainty may depend on the personal characteristics and personal values of patients and clinicians.¹ An effective intervention should allow for such interpersonal differences and be adaptable to the personal needs of a patient. Wallace and colleagues further make the important observation that interventions might also need to be disease-specific.⁴ They observed marked differences in illness-related uncertainty and the rela-

tion between uncertainty and psychological well-being across the SARDs addressed in their research.⁴ It is also important to remember that treatment decisions are made by patients and their doctors, both of whom may experience uncertainty related to the disease and its treatment. Interventions should therefore support these doctor–patient conversations about the disease and treatment options.

Finally, the study by Wallace and colleagues was conducted during the COVID-19 (coronavirus disease 2019) pandemic.⁴ It is likely that illness-related uncertainties in patients with SARD have been exacerbated by the pandemic. Many patients have experienced a lack of access to usual care, with many clinic appointments stopped or moved online, which may have affected opportunities to discuss symptoms and treatments strategies in person. Patients have also faced additional uncertainty about their susceptibility to contracting SARS-CoV-2 infection due to their condition and its treatment and their need for shielding measures.^{17,18} Recent research has further found a marked impact of the pandemic on the mental well-being of rheumatic patients.¹⁹ Unfortunately, some of these exacerbated disease-related uncertainties are likely to continue in the foreseeable future and should be taken into account in future studies addressing illness-related uncertainty.

In conclusion, Wallace et al⁴ have highlighted an important opportunity to support individuals with SARD to deal with uncertainty around their disease and treatment that could improve psychological and physical health outcomes. However, further research is needed to identify what kind of intervention works for which patients in which disease contexts. While such an intervention should address various sources of illness-related uncertainty, avoiding inadvertent exacerbation of anxiety from increased focus on illness-related uncertainty will be an important consideration.

REFERENCES

1. Politi MC, Han PK, Col NF. Communicating the uncertainty of harms and benefits of medical interventions. *Med Decis Making* 2007;27:681-95.
2. Mishel MH. Uncertainty in chronic illness. *Annu Rev Nurs Res* 1999;17:269-94.
3. Wright LJ, Afari N, Zautra A. The illness uncertainty concept: a review. *Curr Pain Headache Rep* 2009;13:133-8.
4. Wallace ZS, Cook C, Finkelstein-Fox L, et al. The association of illness-related uncertainty with mental health in systemic autoimmune rheumatic diseases. *J Rheumatol* xxxxxxxx.
5. Caruso V, Giammanco MD, Gitto L. Quality of life and uncertainty in illness for chronic patients. *Medit J Clin Psychol* 2014;2.
6. Han PKJ, Klein WMP, Arora NK. Varieties of uncertainty in health care: a conceptual taxonomy. *Med Decis Making* 2011;31:828-38.
7. Scaglioni V, Scolnik M, Soriano ER, GJ. P-E. Refractory lupus patients: how frequent do we see them in the 21st century? [abstract]. *Arthritis Rheumatol* 2018;70 Suppl 10.
8. Scolnik M, Scaglioni V, Pons-Estel GJ, Soriano ER. Management of non-renal non-neurologic persistent lupus activity in real world patients from Argentina. *Lupus* 2019;28:1167-73.
9. Falahee M, Simons G, Buckley CD, Hansson M, Stack RJ, Raza K. Patients' perceptions of their relatives' risk of developing rheumatoid arthritis and of the potential for risk communication, prediction, and modulation. *Arthritis Care Res* 2017;69:1558-65.

10. Cleanthous S, Isenberg DA, Newman SP, Cano SJ. Patient Uncertainty Questionnaire-Rheumatology (PUQ-R): development and validation of a new patient-reported outcome instrument for systemic lupus erythematosus (SLE) and rheumatoid arthritis (RA) in a mixed methods study. *Health Qual Life Outcomes* 2016;14:33.
11. Brown A, Hayden S, Klingman K, Hussey LC. Managing uncertainty in chronic illness from patient perspectives. *J Excellence Nurs Healthc Pract* 2020;2:1-16.
12. Guan T, Qan'ir Y, Song L. Systematic review of illness uncertainty management interventions for cancer patients and their family caregivers. *Support Care Cancer* 2021;29:4623-40.
13. Germino BB, Mishel MH, Crandell J, et al. Outcomes of an uncertainty management intervention in younger African American and Caucasian breast cancer survivors. *Oncol Nurs Forum* 2013;40:82-92.
14. Maikranz JM, Steele RG, Dreyer ML, Stratman AC, Bovaird JA. The relationship of hope and illness-related uncertainty to emotional adjustment and adherence among pediatric renal and liver transplant recipients. *J Pediatr Psychol* 2007;32:571-81.
15. Bansback N, Harrison M, Marra C. Does introducing imprecision around probabilities for benefit and harm influence the way people value treatments? *Med Decis Making* 2016;36:490-502.
16. Bansback N, Bell M, Spooner L, Pompeo A, Han PKJ, Harrison M. Communicating uncertainty in benefits and harms: a review of patient decision support interventions. *Patient* 2017;10:311-9.
17. Duculan R, Jannat-Khah D, Mehta B, et al. Variables associated with perceived risk of contracting SARS-CoV-2 infection during the Covid-19 pandemic among patients with systemic rheumatic diseases. *J Clin Rheumatol* 2021;27:120-6.
18. Pope JE. What does the covid-19 pandemic mean for rheumatology patients? *Curr Treatm Opt Rheumatol* 2020;6:71-4.
19. Adnine A, Nadiri K, Soussan I, et al. Mental health problems experienced by patients with rheumatic diseases during Covid-19 pandemic. *Curr Rheumatol Rev* 2021;17:303-11.