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Letter

Evaluating and Refining Strategies for Rheumatoid Arthritis Prevention in First Nations Communities

To the Editor:

We read the article entitled "The Impact of Rheumatoid Arthritis on First Nations and How We Can Work With Communities to Prevent It" by Hani El-Gabalawy[1] with great interest. This paper discusses the high prevalence of rheumatoid arthritis (RA) among First Nations communities in North America, as well as the adverse results, such as early mortality. It is admirable that the study highlights the significance of gene-environment interactions in increasing the risk of getting RA. Such examples of these interactions include the high frequency of particular HLA alleles, such as HLA-DRB1*1402, and environmental factors, such as smoking and periodontal disease.[2] It also underscores the need for preventive measures, with a special emphasis on the preclinical phase. We value the author's insightful opinions on the thorough research of RA. Nonetheless, several limitations could be addressed for further improvement.

First, the timing of intervention for RA prevention is one possible place that may require further improvement. Although the paper suggests a "point of no return" after which autoimmune processes become irreversible, it does not specify when this point might be and what its exact definition is. This ambiguity also creates debate on the optimal time to initiate preventive interventions (or on the potential resource waste of futile past-the-point interventions in the context of First Nations communities, where resources may be limited). Although the article suggests clinical trials with drugs such as methotrexate, abatacept, rituximab, and hydroxychloroquine have shown that they can delay the onset of RA rather than averting it completely, the article by El-Gabalawy[1] still indicates that present treatment strategies start too late to stop entirely an autoimmune process. Therefore, we propose that future research particularly address prevention of RA in the stage of very early intervention (prearthritis phase[3] or even earlier) that will help us identify and conceptualize this "critical point," even if intervention at this stage is deemed as overtreatment. This requires further systemic and careful research to clarify, rather than concentrating too much on the stage of "imminent RA"[1] (looming RA), which is likely past the immunological point of no return.

Additionally, the article by El-Gabalawy[1] also underlines the importance of anticitrullinated peptide antibodies (ACPA) and other biomarkers in predicting future RA development.[4] This indicates that the research by this team[1] focuses on early detection and intervention, which is important for discovering the signals of RA. However, although there is evidence supporting a relationship between ACPA maturation and glycation changes with the onset of RA, transforming these biological markers into effective preventive measures remains a challenge for practical application. For example, the intervention approach of using dried blood spot technology to screen ACPA-positive individuals and then providing supplements like curcumin, omega-3, and vitamin D, although supported by animal models and human studies, still needs more clinical evidence to prove its practicability, pharmaceutical promotion possibilities, effectiveness, and safety, particularly in the First Nations population.

Another limitation shown in this article[1] is that it fails to discuss extensively potential cultural barriers or sensitivities when working with First Nations communities. It mentions the need for trust, understanding, and mutual benefit in building long-term relationships with communities, but it does not explore how to better handle such concerns.[5] For example, in our own experience conducting local screening for conditions such as Keshan disease in mountainous and ethnic minority areas of China,[6] we encountered significant resistance, particularly in terms of language, religion, communication, and cultural practices. How should research be conducted within these vulnerable populations? How can informed consent (individual or collective) be obtained without affecting local communities? And how can mutual benefit be ensured?

Thus, the article by El-Gabalawy[1] lacks a concise discussion on such potential ethical concerns[7] for community engagement practices that could influence the onset and progression of RA, although the title includes the phrase, "how we can work with communities to prevent it." For instance, obtaining informed consent from participants might involve more than just signing documents—perhaps the research team should undergo cultural sensitivity training beforehand to understand the history, traditions, and contemporary issues of the ethnic community involved in the study. Regarding public health support, social workers are arguably among the central players in the "community glue."[8] To establish confidence among local residents, we suggest community members like local social workers who have been strongly engaged in community activities for at least 5 to 10 years be actively involved at every stage of research, from problem identification to implementation and dissemination of results. These individuals must be familiar with the cultural norms, proficient in the local languages, and well-respected or trusted within the community. Further, involving Indigenous health professionals in culturally appropriate approaches for mobilizing or enlightening the community about the intervention plan will also make sense.[9]

To conclude, the research conducted by this team[1] makes a significant contribution to RA research within First Nations communities. However, more detailed exploration is needed to enhance the discussion on the timing of intervention, feasibility of intervention approaches, potential ethical concerns for community engagement practices, pharmacetical promotion possibilities, and culture sensitivity training in First Nations communities. Our suggestions serve only as recommendations. We believe addressing the stated improvements might help the article offer more to its intended researchers in this field.

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

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