Indigenous Australians vulnerable to lupus

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(Medical Xpress)—A new study is currently exploring why Indigenous Australians (IA) suffer more frequently and severely from lupus than non-Indigenous Australians (NIA).

Affecting more than five million people worldwide, systemic lupus erythematosus (SLE), known as lupus, is an auto immune illness, meaning the body's immune system attacks the body itself, destroying healthy tissues, particularly the heart, joints, brain, lungs, skin and kidneys.

A scientific review of lupus research in IA, published in the *Internal Medicine Journal*, reported the prevalence and disease characteristics of lupus in IA differed distinctly from NIA, suggesting the possibility of a distinct and unique immunologic pathway causing this autoimmune disease in Indigenous populations.

Lead author Dr Fabien Vincent, from the Department of Immunology at Monash University, said lupus was up to four times more prevalent in IA compared to NIA, and IA suffered from a more severe form of lupus with a higher numbers of deaths.

"There is a higher prevalence of this illness intrinsic to this particular population and Indigenous Australians appear to have a different set of symptoms of lupus from non-Indigenous Australians," Dr Vincent said.

"Interestingly, prevalence and disease characteristics of lupus also appear to differ between IA communities, depending on the region of Australia.

"In Far North Queensland, compared to non-Indigenous Australians, they have less photosensitivity which is an abnormal reaction of the skin to the sunlight, more renal involvement which means that their kidney function is often affected. In the Northern Territory, they have more anti-Sm autoantibodies than non-Indigenous Australians, which are specific to this disease highlighting the abnormal production of antibodies by the body against itself."

Dr Vincent said the potential findings might lead to new therapeutic strategies that target this distinct pathogenic pathway causing lupus.

"These differences in lupus prevalence, severity and disease manifestation may reflect and be influenced by different genetic and environmental factors such as high ambient ultraviolet exposure and prevalence of infections," Dr Vincent said.

"There's a possibility that environmental factors act as triggers of disease when combined with genetic factors, such as an autoimmune predisposition or susceptibility in Indigenous Australians.

"Considering the genetic-environmental interactions, and not just genetic background, may lead to better knowledge of the underlying causes of lupus in this population. It may also improve the health status of Indigenous Australians and close the health gap between Indigenous and non-Indigenous lupus sufferers."

More information: onlinelibrary.wiley.com/doi/10… 1/imj.12039/abstract

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