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Lupus discovery could help manage disease in African patients

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Two variants of an autoimmune disease that affects thousands but is hard to diagnose are relatively common among black Africans, research shows.

The findings, relating to systemic lupus erythematosus, or SLE, could improve diagnosis and treatment of the condition.

They could enable better management of the disease in patients of African descent, particularly in southern Africa, where incidence and mortality rates are relatively high.

Blood tests in black African patients pinpointed a high prevalence of two types of the disease, one of which was previously unacknowledged.

SLE—the most common form of lupus—can affect many parts of the body including the kidneys, heart, lungs, blood, brain and skin.

The new variants were identified by analysing antibodies that attack proteins in healthy cells.

Some of the patients—almost half of those tested—carried an antibody already linked with lupus and used in its diagnosis. Patients with this antibody are more likely to have classic symptoms, including diseased organs and joints.

A second, larger group of patients—many of whom had skin-related

symptoms—carried an antibody targeting a different protein in healthy cells. This antibody was not previously known to be important for SLE and is not currently used in diagnosis.

The study, carried out by the University of Edinburgh and partners in Zimbabwe, suggests that diagnostic tests for lupus should be broadened to include the second antibody.

The current recommended diagnosis method tests for the first antibody only. Incorporating the second antibody in tests would allow earlier diagnosis of the more predominant variant of the disease, and improved outcomes for patients, researchers say.

The disease occurs more frequently in people of African descent, with worse symptoms and higher mortality. If diagnosed and managed early, it is usually not life-threatening, but poor and late diagnosis in the developing world leads to high mortality rates.

The study, published in *BMJ Global Health*, was funded by the OAK Foundation and the UK National Institutes of Health Research.

Professor Francisca Mutapi, of the University of Edinburgh's School of Biological Sciences, who led the study, said: "For the first time, we have highlighted the importance of two variants of systemic lupus that affect black Africans, including one which was previously not defined in detail. Thanks to our research, we also have the means to diagnose and distinguish them."

Professor Elopy Sibanda, of the Asthma, Allergy and Immunology Clinic in Harare, Zimbabwe, who led the clinical aspects of the study, said: "These findings will be valuable in diagnosing SLE in affected patients. It is currently difficult to diagnose lupus erythematosus, as many symptoms overlap with those of other locally prevalent conditions,

including HIV."

More information: Elopy N Sibanda et al, Evidence of a distinct group of Black African patients with systemic lupus erythematosus, *BMJ Global Health* (2018). DOI: 10.1136/bmjgh-2017-000697