

Researchers pioneer kidney disease prediction method

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An Enzyme Linked Immuno- absorbent assay asSAy (ELISA).

(PhysOrg.com) -- A study into the relationship between antibodies and proteins in people with Lupus could mean earlier diagnosis of kidney disease in such patients, and lead the way for earlier diagnoses for other autoimmune diseases.

A similar method has been developed for early diagnosis tools for other conditions such as [rheumatoid arthritis](#).

Researchers from the Peninsula Medical School in Exeter and Torbay Hospital in Torquay are to patent a modified [blood protein](#) created in Westcountry laboratories and use its relationship to antibodies as an effective form of early diagnosis of [kidney disease](#) in patients with the autoimmune disease, Lupus.

Patients with Lupus are difficult to diagnose for the disease. As an autoimmune disease it produces antibodies that attack the proteins that form the cells of an individual's tissues and organs. As a consequence its symptoms are so non-specific that they mimic other types of disease such as rheumatoid arthritis and multiple sclerosis, resulting in symptoms ranging from general aches and pains to the destruction of vital organs.

Doctors have to take great care before making a confirmed diagnosis and sometimes it can take up to five years for a Lupus patient to be diagnosed correctly.

Those suffering from Lupus have a higher risk of [cardiovascular disease](#) and kidney disease. The latter once detected is often irreversible, hence the need to perfect an 'early warning system' for patients with Lupus who develop renal complications.

The modified blood protein is readily recognised by the body's [antibodies](#). By exploiting the difference between a normal blood protein and a modified one, the research team has been able to develop a method or 'assay' to determine the early detection of kidney disease and its developmental progress.

Dr Paul Eggleton from the Peninsula Medical School commented: "Patients with Lupus are effectively hit by a diagnosis double whammy - the nature of the disease means that an accurate diagnosis can take years, by which time related complications such as kidney disease are already well advanced. By developing this method of diagnosis, which simply requires a small sample of blood, we have established a way to identify kidney disease at an earlier stage. We are currently trialling the test in patient blood samples taken before, during and after they developed kidney complication. This means that, while in most cases the effects of the disease cannot be reversed, doctors are able to prescribe therapies

and lifestyle changes that mitigate the worst effects of the disease for patients, or if caught early enough can attempt to prevent the onset of disease”

He added: “The other exciting element of our work is its potential application to other autoimmune diseases, such as rheumatoid arthritis, multiple sclerosis and irritable bowel. We are part of a pan-European consortium of researchers all working towards developing biomarkers similar to ours for [Lupus](#) and kidney disease that can be applied to other [autoimmune diseases](#).”

Provided by University of Exeter ([news](#) : [web](#))

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