New way of classifying scleroderma

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A new way of classifying scleroderma will greatly help the diagnosis and stratification of the debilitating medical condition, as well as assist in researching other autoimmune diseases.

The work, conducted at Flinders University in South Australia by PhD candidate Karen Patterson, profiles patient autoantibodies with clinical associations rather than assessing skin fibrosis – an approach that has been used for decades.

Scleroderma, or systemic sclerosis, is a chronic connective tissue disease and, according to Scleroderma Australia, the condition varies widely in different patients, with some patients having only a very minor problem with never any progression of the disorder, while others can have a very serious illness.

The new 'personalised medicine' approach is expected to be more accurate for patient prognosis and for stratifying patients according to their disease subsets, which is vital for clinical trials.

"Assessing skin fibrosis can be difficult because the degree of fibrosis varies over time," Patterson said.

Professor Peter Robert-Thomson, former Clinical Director for the SA Pathology Immunology Directorate, and Chairman, Quality Assurance Program in Immunology (RCPA), said Patterson's work was a step forward in the search for an effective biomarker for scleroderma.

"Karen's work is likely to be a game changer in the diagnosis and stratification of this disease and it is even more impressive considering there has been almost no progress over the last 30 years in characterising this disease and in finding an effective therapy," he said.

Patterson said that while scleroderma was relatively rare – around 5,000 Australians suffer from the condition - she hoped her research would also have positive implications for the treatment of other autoimmune diseases.

"Scleroderma is a rare condition but there are over 80 autoimmune diseases which collectively affect about ten per cent of the population (mostly women) and of course this contributes greatly to the overall burden of disease in social and economic costs," she said.

"It's called an 'Orphan disease', but research on one autoimmune disease has great potential in assisting other autoimmune diseases as they share many common symptoms.

"That's why they are so hard to diagnose."

Patterson, her principal supervisor, Associate Professor Jenny Walker and co-supervisor, Professor Peter Roberts-Thomson, published the work in *Arthritis and Rheumatology.*

Provided by The Lead