Moderate to severe psoriasis is associated with an increased risk of chronic kidney disease independent of traditional risk factors, such as diabetes and heart disease, finds a study published in *BMJ* today.

The authors recommend closer monitoring for kidney problems in patients with 3% or more of their body surface area affected to help detect and treat signs early and suggest careful consideration of medications which may cause kidney disease in this at risk patient population.

Psoriasis is a common, chronic inflammatory disease of the skin and joints that affects 2-4% of the general population. Increasing evidence suggests that psoriasis is associated with diabetes and heart disease independent of traditional risk factors. Some doctors think psoriasis may also be associated with kidney disease, but so far, studies have been small and shown conflicting results.

So a team of researchers based in Philadelphia, USA decided to compare the risk of chronic kidney disease in patients with and without psoriasis.

Using a UK primary care electronic medical records database (THIN), they identified 143,883 patients aged 18 to 90 years with psoriasis. These patients were matched with 689,702 patients without psoriasis who acted as controls. Patient with psoriasis who received phototherapy or oral or injectable (biologic) medications were defined as having severe disease.

The team then analysed how many of these patients had received a diagnosis of chronic kidney disease based on standard tests between 2003 and 2010.

Known risk factors for chronic kidney disease, such as age, sex, presence of diabetes, high blood pressure, high cholesterol levels, and use of NSAIDs were also taken into account.

The researchers found that patients with psoriasis, particularly those with severe disease, were at greater risk of developing moderate to advanced (stage 3 to 5) chronic kidney disease compared with control patients. Furthermore, those with severe psoriasis were nearly twice as likely to develop chronic kidney disease and were more than four times as likely to develop end stage renal disease requiring dialysis.

After adjusting for known risk factors, severe psoriasis remained an independent risk factor for chronic kidney disease and end stage renal disease requiring dialysis.

A further analysis of 8,731 psoriasis patients with measurements of affected body surface area matched to 87,310 patients without psoriasis showed similar results - a greater risk of chronic kidney disease in patients with moderate and severe disease.

Mild psoriasis is defined as limited disease with 2% or less body surface area affected, moderate as scattered disease with 3-10% body surface area affected and severe as extensive disease with more than 10% body surface area affected.

The combined results indicate that, although no association is seen in patients with truly mild disease, associations are seen in moderate and severe psoriasis, which are estimated to affect over 20% of patients worldwide, say the authors.

They also point out that, although the relative risk was higher in younger patients, the absolute risk of chronic kidney disease attributable to psoriasis increases with age.

For example, in patients aged 40-50 with severe disease, psoriasis accounts for one extra case of chronic kidney disease per 134 patients per year, and in those aged 50-60, it accounts for one additional case per 62 patients per year, they
"Future studies are warranted to confirm our findings, determine the mechanisms mediating renal insufficiency in psoriasis, and examine the impact of treatment for psoriasis on the risk of chronic kidney disease," they conclude.

More information: http://www.bmj.com/cgi/doi/10.1136/bmj.f5961

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