GENETICS

New ankylosing spondylitis susceptibility genes identified

Results from the first genome-wide screen for ankylosing spondylitis susceptibility genes reveal four new genetic loci associated with the disease, and suggest a major role for the interleukin (IL)-23 and IL-1 pathways in this condition.

Ankylosing spondylitis is a common cause of inflammatory arthritis causing pain, stiffness and progressive joint ankylosis. The disease typically affects the spine and sacroiliac joints but can also cause hip and joint arthritis and extra-articular inflammation. Previous work showed that the disease is strongly associated with the gene *HLA-B27*, although other genes are thought to be involved, and associations with *IL23R* and *ERAP1* have been confirmed.

A consortium of researchers from Australia, UK and USA screened and genotyped the genomes of 2,053 people of European descent with ankylosing spondylitis and 5,140 ethnically matched controls, with replication of their screen in an independent cohort of 898 British ankylosing spondylitis cases and 1,518 British controls, to identify genes associated with ankylosing spondylitis. Reveille *et al.* found four genetic loci associated with disease susceptibility: the gene deserts 2p15 and 21q22 as well as the genes *IL1R2* and *ANTXR2*. The researchers also found an association with the major histocompatibility complex, *IL23R* and *ERAP1*, which replicated published data. The researchers acknowledge that further screens with larger sample sizes are needed to extend the understanding of the genetic etiology of this condition.

Katrina Ray

Original article The Australo-Anglo-American Spondyloarthritis Consortium (TASC). Genome-wide association study of ankylosing spondylitis identifies non-MHC susceptibility loci. *Nat. Genet.* doi:10.1038/ng.513