New glandular fever, genes and MS link

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(Medical Xpress) -- Scientists working on the Australian-based Ausimmune Study have discovered that a past infection with glandular fever, also known as the Epstein-Barr virus (EBV), combined with genetic variations in the immune system can greatly increase a person's risk of developing multiple sclerosis (MS).

Associate Professor Robyn Lucas from the College of Medicine, Biology and Environment at the Australian National University said the research could lead to new therapeutic and preventative strategies for MS directed at relevant components of the immune system.

The study, published today in the online version of the international journal Neurology, involved nearly 300 people who had experienced 'a first demyelinating event', which is an episode of the type of symptoms

that occur in MS and a possible precursor of MS, and over 500 healthy participants.

“We found that the presence of EBV antibodies was directly related to an increased risk of demyelinating disease, and there was also a strong relationship with certain genes of central importance to the immune system,” Associate Professor Lucas said.

“High levels of EBV antibodies indicate a past infection with glandular fever, which in combination with a specific HLA-DR15 or HLA-A genotype increased the risk of a first demyelinating event by 20 times.”

MS affects about 2.5 million people worldwide and almost 20,000 in Australia. It can be a devastating condition in which the immune system attacks the brain and spinal cord, occurring in the prime of life and mostly in young women.

“These findings are consistent with other studies showing an association between markers of past EBV infection and MS risk and we have also shown further interaction with other immune system genes in the HLA class I region and CTLA-4,” Associate Professor Lucas said.

“This work is really encouraging as it starts to bring together the different risk factors that we know are involved in MS. It points us in the right direction for further research to prevent and cure MS.”

The team found no evidence that a current EBV infection was linked to an increased risk of a ‘first demyelinating event’.

Provided by Australian National University