Medical Xpress

Study finds GERD can induce occurrence of rheumatoid arthritis, but not vice versa

February 1 2024, by Elana Gotkine

Gastroesophageal reflux disease (GERD) causally and positively influences rheumatoid arthritis (RA), but RA has no significant influence on GERD, according to a study published online Dec. 13 in *Frontiers in Genetics*.

Haifan Wang, from The Second Affiliated Hospital of Xi'an Jiaotong University in China, and colleagues examined the bidirectional causal effects between GERD and RA by two-sample Mendelian randomization (MR) analyses using genetic evidence for 129,080 GERD cases versus 602,604 controls and 6,236 RA cases and 147,221 controls. The primary analysis used an inverse-variance weighted method.

The researchers found valid evidence provided by both univariate (UV)MR and multivariate (MV)MR analyses that RA was causally and positively influenced by GERD (odds ratios, 1.49 and 1.69 for UVMR and MVMR, respectively), but RA did not influence GERD.

"The results suggested that GERD can induce the occurrence of RA, whereas RA has no significant impact on GERD," the authors write. "In particular, individuals with GERD are at a 69 percent higher risk of developing RA, highlighting GERD as a significant risk factor for this condition."

More information: Haifan Wang et al, Rheumatoid arthritis and gastroesophageal reflux disease: a bidirectional and multivariable two-sample Mendelian randomization study, *Frontiers in Genetics* (2023). DOI: 10.3389/fgene.2023.1280378