

GENETICS

Genetic susceptibility has a role in the development of diverticular disease

Genetic influence has an important role in susceptibility to diverticular disease, say Swedish scientists.

Lifestyle factors are already known to have a crucial role in the development of this disease—diverticular disease is more common in Western countries than in other parts of the world. These lifestyle factors include smoking, physical inactivity and a low intake of dietary fibers. “However, to our knowledge, there is no published literature on attempts to quantify the hereditary contribution to the disease,” say Johan Granlund and Peter Thelin Schmidt, Karolinska Institutet, Stockholm, Sweden.

Researchers conducted a twin study to investigate the influence of genetics on the development of diverticular disease. The Swedish Twin Registry was cross-linked to the Swedish Inpatient Registry. 104,452 twins were identified as meeting

the inclusion criteria for the study; of these, 2,296 had diverticular disease. The odds ratio of developing the disease if one’s co-twin was affected was 7.15 for monozygotic twins and 3.20 for same-gender dizygotic twins. The influence of heritability was estimated at 40% and nonshared environmental effects at 60%.

“The biology behind the genetic susceptibility of developing diverticular disease is unknown and needs to be investigated further,” conclude Granlund and Thelin Schmidt. These biological pathways might include immune responses, mucosal structures or perhaps alterations in the gut microbiota.

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