17. Body mass index and the diagnosis of endometriosis: Findings from a national

data linkage cohort study

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Abstract

Background: Women with lower body mass index (BMI) have a higher risk of surgically

confirmed endometriosis but this finding runs counterintuitive to the oestrogen-dependent

theory for the disease. Increasingly, endometriosis is diagnosed via non-surgical methods. We

examined BMI at age 18-23 years, and changes in BMI, and the risk of endometriosis

according to the diagnostic method.

Methods: We analysed data from 11 794 young women, born in 1989-95, who completed six

surveys as part of an Australian, longitudinal cohort study between 2013 and 2018. Women's

survey responses were linked to administrative health records to identify endometriosis. Cox

proportional hazards models modelled associations between BMI at age 18-23 years, and

changes in BMI, and endometriosis. Analyses were stratified by the diagnostic method of

endometriosis: clinically confirmed endometriosis (based on hospital discharge diagnosis)

versus clinically suspected endometriosis (women's reports of physician-diagnosed

endometriosis).

Results: There were 223 cases of clinically confirmed endometriosis and 396 cases of

clinically suspected endometriosis. Women who gained weight after age 18-23 had lower risk

of clinically confirmed endometriosis than women without endometriosis whose weight

remained stable (HR = 0.64, 95% CI = 0.47-0.88). Women who were overweight (HR = 1.29,

95% CI = 1.01-1.66) at age 18-23 had higher risk of clinically suspected endometriosis than

women of normal weight without endometriosis.

Conclusions: The risk of clinically confirmed endometriosis was lower among women who

gained weight compared to women with stable weight. The risk of clinically suspected

endometriosis was higher among women who were overweight compared to normal weight.

Keywords: Body mass index; Cohort study; Endometriosis; Obesity; Weight change.