Obstetrics and gynaecology

Women with endometriosis at raised risk of ovarian cancer

The risk of ovarian cancer is increased in women with endometriosis, a large cohort study from Scotland has shown. The study also found that women with endometriosis are likely to undergo more surgical procedures compared with women who do not have the condition.

A total of 17,834 women diagnosed with endometriosis by either laparoscopy or laparotomy, between 1981 and 2009, were studied.

Three comparator groups were collated:

- **Group A:** 83,303 women undergoing diagnostic laparoscopy usually for pelvic pain or investigation of infertility
- **Group B:** 162,966 women undergoing laparoscopic sterilisation
- **Group C:** 17,834 age-matched women from the general population.

Women with endometriosis were on average of slightly higher socio-economic status. There were marginal age differences. However, no data were available on parity, smoking, ethnicity, age at menarche, or use of hormonal contraception.

- Overall, 62% of women with endometriosis had a subsequent surgical procedure. The respective figures for groups A, B and C women were 50.6%, 36%, and 16.3% respectively ($P < 0.001$).

After adjustment, the incident rate ratios (IRR) for subsequent surgery in women with endometriosis were 1.67 (95% CI: 1.65-1.69), 2.74 (95% CI: 2.71-2.78), and 3.03 (95% CI: 2.95-3.13) compared with women in groups A, B and C respectively ($P < 0.001$ for all).

- The percentage of women having four or more procedures were 16.6% in women with endometriosis and 10.7%, 5.7% and 1.3% in groups A, B and C respectively.
- Women with endometriosis were far more likely to have a hysterectomy; 22.7% compared with 10.6%, 11%, and 2.2% in the respective comparator groups A, B and C. They were also more likely to have their hysterectomy at an earlier age. ($P < 0.001$ for all three control groups).
- The percentage of women with endometriosis who developed ovarian cancer was 0.2%. However, women with endometriosis were more likely to develop ovarian cancer than those who had undergone laparoscopic sterilisation; adjusted hazard ratio (HR) 1.75 (95% CI: 1.26-2.45) and the age-matched controls from the general population; HR 1.77 (95% CI: 1.08-2.89)

The study authors conclude: 'Our findings corroborate the existing evidence in favour of increased risk of ovarian cancer in women with endometriosis, though the magnitude of effect is much smaller.

'A shared pathophysiology may explain a higher risk of ovarian cancer associated with endometriosis including direct transformation from benign to malignant epithelium, free iron-induced oxidative damage causing DNA mutations and genomic instability similar to cancer cells.'

This study confirms the increased risk of ovarian cancer in women with endometriosis and also reveals the extent of future surgical morbidity.

Delayed diagnosis is a significant problem in endometriosis. NICE highlights the need to consider the diagnosis of endometriosis, even in teenagers with dysmenorrhoea, dyspareunia, or cyclical urinary or bowel symptoms.[1]

As GPs we need to consider endometriosis as a differential in any women with cyclical pelvic symptoms and refer onwards as early as possible.

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Saraswat L, Ayansina D, Cooper KG et al. Impact of endometriosis on risk of further gynaecological surgery and cancer: a national cohort study *BJOG* 2018;125:64-72

REFERENCE

1 National Institute for Health and Care Excellence. NG73. Diagnosis and management of endometriosis. NICE. London. 2017 www.nice.org.uk/guidance/ng73/chapter/Recommendations#organisation-of-care

See also Symptom recognition key to diagnosing endometriosis, p13

Diabetes

Comparing cardiovascular outcomes in different diabetes drug classes

Canagliflozin was associated with a lower risk of heart failure admissions compared with other classes of diabetes drugs, in a population-based retrospective cohort study from the United States.

A nationwide sample of patients, aged 18 years or over, with type 2 diabetes drawn from a large anonymised US commercial healthcare database was studied. The three arms of the trial compared cohorts of patients who were started on canagliflozin with patients started on other diabetes therapies.

- The first cohort compared 21,431 patients on canagliflozin vs 77,463 on a DPP-4i
- The second compared 25,806 patients on canagliflozin vs 32,676 on a GLP-IRA
- The third compared 18,924 patients on canagliflozin vs 115,435 on a sulphonylurea.

The main outcome measures were hospital admission for heart failure, and a composite cardiovascular endpoint of hospital admission for acute myocardial infarction, or ischaemic or haemorrhagic stroke.

The canagliflozin arms showed a reduction in heart failure admissions by 30-49%, and no difference in outcomes for the composite cardiovascular endpoint.

The hazard ratios (HR) for heart failure admission in the 30-month follow-up period were:

- 0.70 (95% CI: 0.54-0.92) for canagliflozin vs a DPP4i
- 0.61 (95% CI: 0.47-0.78) for