Anni Tuominen[a, b], Liisu Saavalainen[a], Anna But[c], Päivi Härkki [a], Oskari Heikinheimo[a]

FIRST DELIVERY AFTER SURGICALLY DIAGNOSED ENDOMETRIOSIS IN NULLIPAROUS WOMEN ACCORDING TO THE TYPE OF ENDOMETRIOSIS

[a] Department of Obstetrics and Gynecology, Helsinki University Hospital and University of Helsinki, Helsinki; [b] Department of Obstetrics and Gynecology, Hyvinkää Hospital, Hyvinkää; [c] University of Helsinki, Helsinki

HELSINGIN YLIOPISTO
HELSINGFORS UNIVERSITET
UNIVERSITY OF HELSINKI
LÄÄKETIETEELLINEN TIEDEKUNTA
MEDICINSKA FAKULTETEN
FACULTY OF MEDICINE

HUS Helsinki University Hospital

OBJECTIVE

To assess the first deliveries after surgically diagnosed endometriosis according to the type of endometriosis.

MATERIALS AND METHODS

A cohort of nulliparous women aged 15-49 years with surgically diagnosed endometriosis from the Finnish Hospital Discharge Register between 1.1.1998-21.12.2012 (n=12 600).

The study group was divided into subgroups according to the type of endometriosis: ovarian (n=3776), peritoneal (n=4303), deep (n=857), and other (n=3664) endometriosis. Exclusion criteria were previous hysterectomy or sterilization either in medical history or at the time of surgical diagnosis of endometriosis.

The follow-up started from the first surgical diagnosis of endometriosis and ended in the first delivery, sterilization, hysterectomy, 50 years of age, death or in the end of 31.12.2015 - whichever came first.

We assessed the crude incidence rate, median survival time (median time when 50% of women had delivered) and median time to the first delivery by the type of endometriosis. The differences in the survival distributions between the groups were compared using log-rank test.

To examine the differences in the incidence between the groups, we assessed the crude and age-adjusted incidence rate ratio by fitting Poisson regression models. In addition, we calculated and plotted the cumulative incidence of first delivery.

Table. First delivery after surgically diagnosed endometriosis, according to the type of the disease

	Nulliparous women with surgically diagnosed endometriosis (n=12 600)			
	Ovarian (n=3776)	Peritoneal (n=4303)	Deep (n=857)	Other (n=3664)
Age at diagnosis of endometriosis, median (IQR)	30.8 (26.8, 35.8.)	28.6 (24.8, 32.7)	28.8 (25.6, 32.2)	29.8 (26.3, 33.8)
Follw-up time, person-years	21984	23206	4863	20256
Time to first delivery, years median, (IQR)	2.2 (1.30, 3.89)	2.3 (1.37, 4.23)	2.3 (1.44, 4.04)	2.4 (1.38, 4.22)
Age at first delivery	31.8 (28.7, 34.9)	31.2 (27.9, 34.3)	31.1 (28.1, 33.9)	31.7 (28.8, 34.8)
Median time when 50% of women had delivered, years (95% CI)	9.2 (8.3, 10.8)	5.0 (4.8, 6.4)	5.7 (4.8, 6.4)	6.5 (6.0, 7.0)
Crude incidence rate ratio, IRR (95% CI)	0.71 (0.67, 0.75)	Ref.	0.92 (0.83, 1.01)	0.84 (0.79, 0.89)
Age-adjusted incidence rate ratio (95% CI)	0.80 (0.75-0.85)	Ref.	0.92 (0.83-1.01)	0.90 (0.85-0.95)

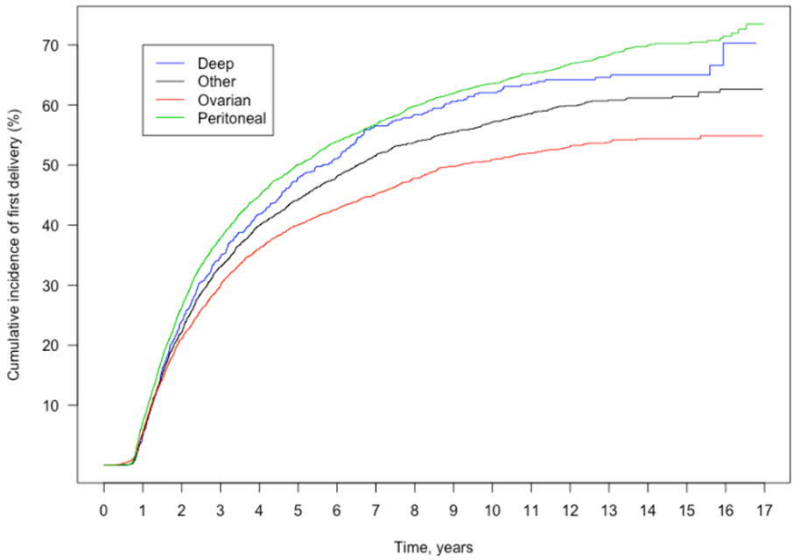

Figure. Cumulative incidence of first delivery after surgically diagnosed endometriosis

RESULTS

Altogether 6689 (53.1%) of the 12,600 women delivered during the follow-up (Table.) The cumulative incidence of first delivery is presented in the Figure. There was a significant difference in survival distributions ($p < 0.001$). Peritoneal subgroup was set as a refence, due to highest incidence of first delivery. Compared to the peritoneal subgroup, the incidence of first delivery was lower in the ovarian group (crude IRR=0.71, 95% CI 0.67-0.75, p<0.001) and in the group of other endometriosis (crude IRR=0.84, 95% CI 0.79-0.89, p<0.001). These differences persisted after adjustment for age (Table).

CONCLUSIONS

The incidence of first delivery after surgically diagnosed endometriosis varied according to the type of endometriosis, being highest in women with peritoneal endometriosis and lowest in women with ovarian endometriosis