

Impact of Family History on Likelihood of Endometriosis Diagnosis

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INTRODUCTION

- Endometriosis often presents with dysmenorrhea, dyspareunia, dyschezia, chronic pelvic pain, and infertility¹
- Exact mechanism of development is debated though complex intersection of genetic and environmental factors suspected^{2,3}
 - Lower BMI associated with increased rate of endometriosis^{4,5}
 - Increased parity associated with decreased rate of endometriosis^{4,5}
- Twin studies estimate 50% heritance of endometriosis^{2,3}
- Assessing family history may be helpful in distinguishing endometriosis from other similar presentations

OBJECTIVE

- Within a large sample of patients presenting for evaluation of endometriosis over ten years at a single center, we aim to assess differences in rate of diagnosis, age at presentation, BMI, gravidity and parity between patients with and without a reported family history of endometriosis

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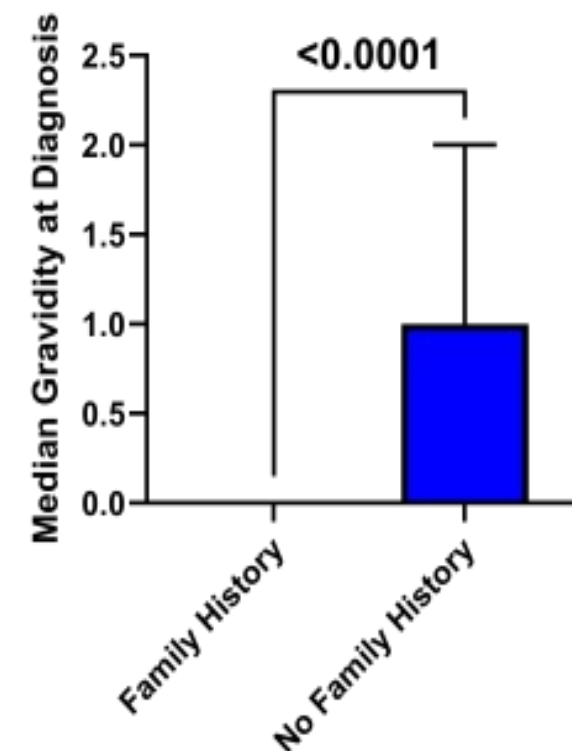
METHODS

- 788 patients undergoing surgery for suspected endometriosis from 2011-2022 were selected for review
- Analyses were performed in JMP Pro 17; Fisher's exact test was used to compare categorical variables and Mann-Whitney test was used to compare continuous variables
- A nominal logistic regression was used to evaluate factors increasing odds of histopathology-confirmed endometriosis. A p-value of <0.05 was considered statistically significant

RESULTS

- Patients with a **family history of endometriosis** presented significantly **younger** (26.5 [23, 24.8] vs 32 [27, 38], p<0.001)
- Patients **without a family history** of endometriosis had significantly **higher gravidity** (0 [0, 2] vs 0 [0, 0], p<0.001) and **parity** (0 [0, 2] vs 0 [0, 0], p<0.001) compared to patients with a family history of endometriosis
- A significantly **higher proportion** of patients with a **family history** of endometriosis were found to have **confirmed endometriosis** (62 [96.9%] vs 592 [81.8%], p<0.001)
- Patients with a **family history** of endometriosis **have 6.9 times increased odds** of development of **pathology-confirmed endometriosis** compared to patients that have no family history (OR=6.9, 95%CI [1.67-28.61], p=0.008)

Variable	All patients (n=788)	Family history of endometriosis (n=64 [8.1%])	No family history of endometriosis (n=724 [91.9%])	p-value
Age (years, median [IQR])	32 (27, 38)	26.5 (23, 34.8)	32 (27, 38)	<0.001
BMI (kg/m ² , median [IQR])	26.5 (22.6, 32.2)	24.6 (21.9, 33.2)	26.6 (22.7, 32.2)	0.154
Gravidity (median [IQR])	0 (0, 2)	0 (0, 0)	1 (0, 2)	<0.001
Parity (median [IQR])	0 (0, 2)	0 (0, 0)	0 (0, 2)	<0.001
Endometriosis on pathology, n(%)	654 (83.0)	62 (96.9)	592 (81.8)	<0.001
Odds of endometriosis development (OR [95% CI])	-	6.9 (1.67-28.61)	0.1 (0.03-0.60)	0.008



CONCLUSION

- Patients presenting for **evaluation of endometriosis** with a **reported family history** are significantly **more likely** to be **diagnosed** and **diagnosed at an earlier age** with **fewer past pregnancies** than their counterparts without a family history
- This supports past findings suggesting a genetic component to development of endometriosis and reiterate the importance of assessing family history in this patient population

