

Lesion distribution characteristics of deep infiltrating endometriosis with ovarian endometrioma: An observational clinical study

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Hungling Kwok
the Seventh Affiliated Hospital, Sun Yat-sen University

Hongye Jiang
Sun Yat-sen University First Affiliated Hospital

Tian Li
the Seventh Affiliated Hospital, Sun Yat-sen University


Huan Yang
the seventh Affiliated Hospital, Sun Yat-sen University

Hui Fei
the Seventh Affiliated Hospital, Sun Yat-sen University

Li Cheng
the Seventh Affiliated Hospital, Sun Yat-sen University

Shuzhong Yao
Sun Yat-sen University First Affiliated Hospital

Shu-Qin Chen
Sun Yat-sen University First Affiliated Hospital

 chenshuqin1021@163.com Corresponding Author

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Abstract

Purpose: To investigate the characteristics of deep infiltrating endometriosis (DIE) lesion distribution when associated with ovarian endometrioma (OEM).

Methods: The present study analyzed retrospective data obtained by the First Affiliated Hospital of Sun Yat-sen University, between June 2008 to June 2016. A total of 304 patients underwent laparoscopic surgery for complete removal of endometriosis by one experienced surgeon, and histological confirmation of OEM associated with DIE was conducted for each patient. Clinical data were recorded for each patient from medical, operative and pathological reports. Patients were then divided into two groups according to unilateral or bilateral OEM. Patients with unilateral OEM were subsequently divided into two subgroups according to OEM location (left- or right-hand side) and the diameter of the OEM (≤ 50 and > 50 mm). The distribution characteristics of DIE lesions were then compared between the groups.

Results: DIE lesions were widely distributed, 30 anatomical sites were involved. Patients with associated unilateral OEM (n=184 patients) had a significantly increased number of DIE lesions when compared with patients with bilateral OEM (n=120 patients; 2.76 ± 1.52 vs. 2.33 ± 1.34 ; $P=0.006$). Compared with bilateral OEM with DIE, there was a higher rate of intestinal (39.1% vs. 18.3%; $P<0.01$) and vaginal (17.4% vs. 6.7%; $P<0.01$) infiltration by DIE lesions in unilateral OEM with DIE. The mean number of DIE lesions was not significantly correlated with the location or size of the OEM (2.83 ± 1.56 vs. 2.74 ± 1.53 ; $P=0.678$; and 2.65 ± 1.42 vs. 2.80 ± 1.43 ; $P=0.518$, respectively). There was no significant difference between the groups with OEM ≤ 50 mm and > 50 mm.

Conclusion: Lesion distribution characteristics in women diagnosed with histologically proven OEM associated with DIE were frequently multifocal and severe.

Full Text

Due to technical limitations, full-text HTML conversion of this manuscript could not be completed. However, the manuscript can be downloaded and accessed as a PDF.

Tables

Table I Preoperative characteristics of the study population.

Patients' characteristics (N= 304)	Values ^a
Age(years)	34.2±5.8(range17-49)
Parity	
Para≥1	158(52.0%)
Nulliparous	146(48.0%)
Infertility	78(25.7%)
Previous surgery for OEM	88(28.9%)
Presenting symptoms ^b	
No symptoms	32(10.5%)
Dysmenorrhea	272(89.5%)
Dyspareunia	39(12.8%)
Chronic pelvic pain	17(5.6%)
Anus bulge	73(24.0%)
Difficulty in defecation	13(4.3%)
Diarrhea	6(2.0%)
Defecation pain	11(3.6%)
Hematochezia	8(2.6%)
Urinary frequency and urgency	9(3.0%)
Haematuria	2(0.7%)
Hydronephrosis	26(8.6%)
Endometrioma laterality	
Left	98(32.2%)
Right	86(28.3%)
Bilateral	120(39.5%)
Endometrioma size (mm)	55.9±23.9 (range10-150)
Number of DIE lesions	2.60±1.5 (range1-9)

OEM, ovarian endometrioma; DIE, deep infiltrating endometriosis.

^aValues are shown as mean ± standard deviation or N(%).

^bDifferent symptoms can be associated in the same patient.

Table II The prevalence of anatomical distribution of DIE lesions. (n=304 patients)

Main lesion ^a	Number of patients(%) ^b
Uterosacral ligament	245(80.6)
Left	57
Right	53
Bilateral	135
Rectum	93(30.6)
Ureter	47(15.5)
Left	22
Right	18
Bilateral	7
Vaginal	40(13.2)
Posterior fornix	33(10.9)
Fallopian tube	29(9.54)
Left	12
Right	4
Bilateral	13
Vaginal rectum	21(6.91)
Rectovaginal pouch	9(2.96)
Bladder	4(1.32)

DIE, deep infiltrating endometriosis.

^aAccording to the location of the lesion recorded during the operation.

^bNumber of patients whose lesions histologically proven deep infiltrating endometriosis.

Table III Characteristics of deeply infiltrating endometriosis lesion distribution associated ovarian endometrioma.

Variables	Comparison		P-value	OR	95% CI
OEM laterality ^a					
	Unilateral n=184(%)	Bilateral n=120(%)			
Number of DIE lesions	2.76±1.52	2.33±1.34	0.006*		
Uterosacral ligament	151(82.1)	94(78.3)	0.421	1.266	0.712-2.249
Intestine	72(39.1)	21(17.5)	0.000*	3.031	1.738-5.286
Vagina	32(17.4)	8(6.70)	0.007*	2.947	1.308-6.641
Posterior fornix	23(12.5)	10(8.3)	0.100	1.571	0.720-3.431
Ureter	29(15.8)	18(15.0)	0.858	1.060	0.560-2.009
Fallopian tube	19(10.3)	10(8.3)	0.563	1.267	0.568-2.827
Rectovaginal pouch	16(8.7)	14(11.7)	0.396	0.767	0.359-1.637
Side of OEM ^a					
	Left side n=98(%)	Right side n=86(%)			
Number of DIE lesions	2.83±1.56	2.74±1.53	0.678		
Uterosacral ligament	81(82.7)	70(81.4)	0.824	1.089	0.512-2.315
Intestine	40(40.8)	32(37.2)	0.617	1.164	0.642-2.109
Vagina	18(18.4)	15(17.4)	0.870	1.065	0.500-2.268
Posterior fornix	15(15.3)	8(9.3)	0.219	1.762	0.078-4.386
Ureter	16(16.3)	13(15.1)	0.822	1.096	0.494-2.431
Fallopian tube	8(8.2)	11(12.8)	0.303	0.606	0.232-1.584
Rectovaginal pouch	9(9.2)	7(8.1)	0.802	1.141	0.406-3.207
Unilateral OEM size ^a					
	≤50mm n=112(%)	>50mm n=72(%)			
Number of DIE lesions	2.77±1.4	2.82±1.4	0.960		
Uterosacral ligament	87(77.7)	64(88.9)	0.053	0.435	0.184-1.027
Intestine	54(48.2)	17(23.6)	0.001*	3.012	1.560-5.817
Vagina	25(22.3)	6(8.3)	0.013*	3.161	1.226-8.164
Posterior fornix	11(9.8)	12(16.7)	0.171	0.545	0.226-1.311
Ureter	15(13.4)	14(19.4)	0.272	0.641	0.289-1.423
Fallopian tube	10(8.9)	9(12.5)	0.437	0.686	0.264-1.781
Rectovaginal pouch	11(9.8)	12(16.7)	0.171	0.545	0.226-1.311

^aValues are shown as mean ± standard deviation or N(%).

*Statistically significant