Coexistence of endometriomas with extraovarian endometriosis and adhesions

Authors

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Introduction

Ovarian endometriosis, known as endometriomas, is the most common location. Endometriomas can be easily diagnosed by transvaginal ultrasound. The main diagnostic challenge is the detection of extraovarian endometriosis and endometriosis-related lesions such as peritoneal and deep infiltrating endometriosis (DIE) and adhesions . Undiagnosed DIE associated with endometrioma is the leading cause of incomplete surgery. Underestimation or misdiagnosis of extensive adhesions and DIE can lead to incomplete treatment on the one hand and delay of diagnosis on the other. This is particularly important in infertile patients who may require reproductive measures, as it can lead to repeated failure of reproductive measures .

Table 1 Overview of patients with and without adhesions depending on the side and size of the endometriomas

Side of ENDR	Size of ENDR	Total N of Pat.	No adhesions	With Adhesions			
				Left	Right	Both sides	D.O.
L	<3 cm	45	12 (26,7%)	17 (37,8%)	2 (4,4%)	9 (20%)	5 (11,1%)
L	3-7 cm	77	10 (13%)	41 (53,2%)	4 (5,2%)	12 (15,6%)	10 (13%)
L	>7 cm	18	4 (22,2%)	7 (39%)	0	4 (22,2%)	3 (16,7%)
All left-side ENDR		140	26 (18,6%)	65 (46,4%)	6 (4,3%)	25 (17,8%)	18 (12,8%)
R	<3 cm	22	3 (13,6%)	2 (9%)	10 (45,4%)	6 (27,3%)	1 (4,5%)
R	3-7 cm	66	7 (10,6%)	6 (9,1%)	21 (31,8%)	16 (24,2%)	16 (24,2%)
R	>7 cm	9	1 (11,1%)	0	2 (22,2%)	3 (33,3%)	3 (33,3%)
All right-side ENDR		97	11 (11,3%)	8 (8,2%)	33 (34%)	25 (25,8%)	20 (20,6%)
All unilateral ENDR		237	37 (15,6%)	73 (30,8%)	39 (16,5%)	50 (21,1%)	38 (16%)

Table 2 Overview of patients with and without adhesions in bilateral endometriomas depending on the size of the endometriomas

Side of ENDR	Size of ENDR	Total N of Pat.	No adhesions	With Adhesions			
				Left	Right	Both sides	D.O.
Both sides	Both-side <3cm	10	0	1 (10%)	1 (10%)	5 (50%)	3 (30%)
	Both-side 3-7cm	36	4 (11,1%)	2 (5,6%)	0	14 (38,9%)	16 (44,4%)
	Both-side >7cm	1	0	0	1 (100%)	0	0
	<3cm/ 3-7cm	21	2 (9,5%)	3 (14,3%)	1 (4,8%)	13 (61,9%)	2 (9,5%)
	<3cm/ >7cm	2	0	0	1 (50%)	1 (50%)	0
	3-7cm/ >7cm	3	1 (33,3%)	0	0	0	2 (66,6%)
All both - side ENDR		73	7 (9,6%)	6 (8,2%)	4 (5,5%)	33 (45,2%)	23 (31,5%)

ENDR- endometriomas, N- number, Pat-patients, D.O.- Douglas obliteration.

Method and material

Patients treated for endometrioma at Academic Hospital Cologne Weyertal from January 2014 to October 2019 were included in this retrospective study. In total there were 1054 patients. 310 medical records were chosen at random without a special selection and the data were analysed. The coexistence of endometriomas with adhesions (adnexal and Douglas adhesions) in the pelvis, peritoneal and deep infiltrating endometriosis was assessed depending on the size and side of the endometriomas. Endometriosis was diagnosed using speculum examination, vaginal palpation and vaginal ultrasound. All endometriomas as well as the peritoneal endometriosis were histologically confirmed by the same pathologist. Only superficial endometriosis without deep infiltration was assessed as peritoneal endometriosis. This means that in cases where a patient had only deep infiltrating endometriosis, peritoneal endometriosis was assessed as "negative". The localisation of the adhesions as well as the existence of the deep infiltrating endometriosis were controlled by the surgical reports. The size of the endometriomas were divided according to the #ENZIAN classification (<3cm, 3-7cm, >7cm)

Table 3 Relationship between endometriomas and peritoneal and deep infiltrating endometriosis

Side of ENDR	Size of ENDR	Total N of Pat.	Peritoneal Endometriosis	DIE	Peritoneal endometriosis and DIE	No endometriosis
One-sided	<3 cm	67	56 (83,6%)	26 (38,8%)	24 (35,8%)	9 (13,4%)
	3-7 cm	143	116 (81,1%)	59 (41,3%)	53 (37,1%)	21 (14,7%)
	>7cm	27	18 (66,7%)	11 (40,7%)	8 (29,6%)	6 (22,2%)
All unilateral ENDR		237	190 (80,2%)	96 (40,5%)	85 (35,9%)	36 (15,2%)
All both-sided ENDR		73	60 (82,2%)	38 (52,1%)	33 (45,2%)	8 (11%)
All ENDR		310	250 (80,6%)	134 (43,2%)	118 (38%)	44 (14,2%)

Conclusion

Endometriomas are the relevant problem in gynaecological practice. They are especially important for women of reproductive age. It must be taken into account here that endometriomas usually occur with peritoneal endometriosis and that surgical therapy may be useful. However, adhesions and DIE are to be expected with surgical treatment, which could make the operation more difficult. Especially in large and bilateral endometriomas, a high coexistence with extraovarian endometriomas and adhesions is observed. Therefore, surgery should be performed by an experienced surgeon.