Coincidence of uterine malformations and endometriosis - a clinically relevant problem?

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Introduction

It is suspected that uterine malformations and endometriosis have a high coincidence. Furthermore, it is expected that obstructive uterine malformations are significantly higher affected than non-obstructive malformations. The correlation between endometriosis and uterine malformations may be due to increased retrograde menstruation, which would explain a higher coincidence of obstructive malformations and endometriosis.

Method

A retrospective analysis was performed to determine whether there is a higher prevalence of endometriosis in patients with uterine malformations. In this analysis, patients with uterine malformations who were admitted to our hospital in the period from December 1st, 2014 to November 30th, 2019 were reviewed. The patients were not selected. The desire for children was not taken into account. Each case of a uterine malformation, both as a primary diagnosis as well as a secondary diagnosis, was analysed. Hysteroscopy, laparoscopy and histological securing of the endometriosis were obligatory prerequisites of this study. The endometrium in patients with obstructive uterine malformations was assessed by MRI or vaginal/ abdominal sonography.

Table 1 Distribution of uterine malformations according to the AFS classification. The total number of cases is shown in brackets.

I	Hypoplasia/ agenesia	(2xMRKH*, 2x hypoplasia)	4
II	Unicornuate uterus (16):	a) non-obstructive	1
	with rudimentary horn (a,b,c) (13)	b) obstructive with endometrium**	8
	without rudimentary horn (d) (3)	c) obstructive without endometrium**	4
		d) without rudimentary horn	3
III	Uterus didelphys (double uterus)		4
IV	Bicornuate uterus		18
V	Septate uterus (179)	complete	27
		partial	152
VI	Arcuate uterus		58

* Mayer-Rokitansky-Küster-Hauser syndrome
** Endometrium in rudimentary horn

Table 2 Overview of the collected findings in consideration of the AFS classification

ASF Classification			Number of cases	Endometriosis	Percentage
I	Hypoplasia		4	0	0%
II	Unicornuate	Total number	16	10	62,5%
		a) non-obstructive with rudimentary horn with EM*	1	0	0%
		b) obstructive with EM*	8	7**	87,5%
		c) obstructive without EM*	4	1	25%
		d) without rudimentary horn	3	2	66,7%
III	Didelphys		4	3	75%
IV	Bicornuate		18	13	72,2%
V	Septate	Total number	179	138	77,1%
		complete	27	25	92,6%
		partial	152	113	74,3%
VI	Arcuate		58	45	77,6%

* Endometrium in rudimentary horn
** A case without endometriosis: in rudimentary horn without tube

Results

A total of 295 cases were registered. 16 cases were excluded from the study because no laparoscopy was performed for certain reasons (e.g. random findings in clarification of bleeding disorders in peri-/postmenopausal patients, no laparoscopy requested by the patients). Thus 279 cases were analysed. 263 (94.2%) patients had a non-obstructive uterine malformation, 12 (4.3%) patients had an obstructive uterine malformation and four (1.4%) patients had uterine agenesia/hypoplasia. 209 (74.9%) patients had endometriosis (histologically confirmed peritoneal/deep infiltrating/ovarian endometriosis) whereas in 70 (25.1%) cases no endometriosis was detected.

27 patients were diagnosed with deep infiltrating endometriosis (ENZIAN ABC) in addition to peritoneal and ovarian endometriosis.

Conclusion

Our study showed a high prevalence of endometriosis in women with uterine malformations. For this reason, endometriosis should be specifically sought in uterine malformations (especially the obstructive type). If endometriosis is present, uterine malformations should equally be searched for. The combined presence of endometriosis and uterine malformations is a reason to perform precise diagnostic imaging and early surgery to increase the likelihood of pregnancy in infertile patients. Therefore, when performing laparoscopy in patients with suspected endometriosis, simultaneous hysteroscopy should always be recommended.