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THE RESULTS OF A RETROSPECTIVE ANALYSIS OF THE INFORMATIVE VALUE OF VARIOUS DIAGNOSTIC METHODS FOR ADENOMYOSIS

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Abstract
In recent years, there has been a significant increase in the frequency of adenomyosis, and it is more often diagnosed in the late stages (stage III–IV), which pose a serious threat to the health of patients, including reproductive ones. Currently, there are no research methods that make it possible to verify early-stage adenomyosis non-invasively and with a high degree of informativeness. It is advisable to conduct comprehensive clinical, morphological and immunohistochemical studies to improve the early noninvasive diagnosis of this disease.

Keywords: Internal genital endometriosis, adenomyosis, noninvasive criteria for the initial degrees of adenomyosis.

Introduction

Adenomyosis occupies one of the leading places in the structure of gynecological morbidity and occurs in 12-50% of women of reproductive age. According to both domestic and foreign authors, adenomyosis is a common cause of dysmenorrhea, menometrorrhagia, infertility, and chronic pelvic pain of varying intensity, often leading to psychosomatic and autonomic disorders [1-3]. In recent years, there has been a significant increase in the frequency of this disease, and it is more often diagnosed in the late stages (stage III–IV), which pose a serious threat to the health of patients, including reproductive [5]. This is due to the lack of clear non-invasive criteria for the initial degrees of adenomyosis. The etiology of this disease and its pathogenesis are debatable [4,6]. It is believed that the causes of adenomyosis are reflected in the following two theories: the first suggests the presence of invagination of a deep portion of the endometrium between the ligaments of smooth muscle cells of the myometrium or along the intramiometric lymph vessels; according to the second theory, the cause of adenomyosis should be considered the development of a metaplastic process, which is initiated by the ectopic location of endometrial tissue in the myometrial zone due to its de novo production [2, 3]. Hysteroscopy is widely used among the methods of clinical and instrumental diagnosis of adenomyosis, but the method is invasive, largely subjective, and the range of its sensitivity, according to various authors, ranges from 32.9% to 91.4%, due to its low information content in the early stages of the disease. Specific laboratory signs of this disease are also absent [11].

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Thus, despite the extensive literature data, there are currently no research methods that allow noninvasively, with a high degree of informativeness, to verify early-stage adenomyosis, when the pathological process has not yet spread beyond the boundaries of the "transition zone". Therefore, it is advisable to conduct comprehensive clinical, morphological and immunohistochemical studies of the dysfunctions observed in this area, the data of which will improve the early noninvasive diagnosis of this disease [12].

The purpose of the study – to evaluate the clinical features and informative value of instrumental methods in the diagnosis of various degrees of adenomyosis.

Materials and Methods

In order to assess the informative value of standard methods for detecting diffuse adenomyosis at the retrospective stage of the study, 84 case histories of women who were inpatient treatment from 2021 to 2023 in the gynecological departments of the Tashkent branch of the Russian National Research Center for Maternal and Child Health and GRC No. 3, who underwent hysterectomy for various clinical indications and on the basis of clinical and instrumental Diffuse adenomyosis of various degrees was diagnosed using various methods of histological examination.

The complex of studies clarifying the diagnosis according to medical records included transvaginal ultrasound (TVUZ), liquid hysteroscopy with separate diagnostic curettage and subsequent histological examination of the scraping, as well as histological examination of the material obtained during the operation.

Results and Discussion

Adenomyosis was detected or confirmed histologically in 61 (72.6%) patients. At the same time, out of 61 patients, adenomyosis of various degrees was detected in 27 cases according to the results of transvaginal ultrasound, in 37 cases according to the results of hysteroscopy. In 23 (27.4%) patients, adenomyosis was diagnosed according to clinical and instrumental studies and was not the main diagnosis leading to organ removal, and was not later confirmed by the results of histological examination. Of these, 21 patients were diagnosed with adenomyosis according to ultrasound, and 15 according to hysteroscopy.

Total hysterectomy was performed in 39 of 84 patients (46.4%) and 45 (53.6%) had subtotal hysterectomy. The most common indications for surgery were uterine fibroids and/or adenomyosis in combination with recurrent hyperplastic processes in the endometrium, observed in 48 patients (57%), rapid growth or secondary changes in the myomatous node in 32 (38.6%) patients, as well as grade III adenomyosis and ineffectiveness of conservative therapy for adenomyosis accompanied by menometrorrhagia and severe pain syndrome – in 17 patients (20.3%). Benign ovarian tumor in combination with fibroids and/or adenomyosis was an indication for hysterectomy in 6 patients (7.1%).

The average age of the patients was 43.3 ± 8.8 years. The duration of the disease leading to hysterectomy was 8.6 ± 4.73 years. We did not identify any statistical differences in the characteristics of the gynecological history by group. The gynecological history showed a high incidence of chronic inflammatory diseases of the female genital organs (chronic

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metroendometritis and/or salpingoophoritis) in 64 patients (76.2%) who had repeatedly undergone courses of antibacterial and anti–inflammatory therapy. Vaginal dysbiosis and colpitis were treated in 66 patients (78.6%). Inflammatory diseases have been associated with both bacterial pathogenic and opportunistic flora, as well as with urogenital infection.

Table 1. Distribution of patients with various clinical conditions symptoms of the disease (n = 84)

Parameters	Histologically confirmed adenomyosis (n=61)		Histologically unconfirmed adenomyosis (n=23)	
	Absolute indicator	%	Absolute indicator	%
Menorrhagia	52	85,2	19	82,6
Metrorrhagia	43	70,5	17	73,9
Anemia	55	90,2	21	91,3
Chronic pelvic pain	33	54,1	13	56,5
Dysmenorrhea	26	44,3	10	43,5

When comparing the clinical data of patients with and without histologically confirmed adenomyosis, we found no significant difference in most of the analyzed parameters. Indicators such as menorrhagia, metrorrhagia, anemia, pain syndrome and dysmenorrhea were compared, all of them occurred with equal frequency of cases.

Thus, anamnestic and clinical data do not allow reliable differentiation of adenomyosis by clinical symptoms.

After analyzing the sensitivity and specificity of the standard ultrasound and hysteroscopy techniques, we obtained the following results.

The sensitivity of the drug for grade I adenomyosis was 23.3%, for grade II adenomyosis – 48.7%, for grade III adenomyosis – 96.4 %. The specificity of this technique for grade I adenomyosis was 39.3%, for grade II adenomyosis – 63.4%, for grade III adenomyosis – 97.3%.

When analyzing the results of the verification capability of hysteroscopy, it was revealed that the sensitivity of this method according to the results of a retrospective study was 42.8% for grade I adenomyosis, 66.4% for grade II adenomyosis, 96.4 % for grade III adenomyosis. The specificity of this technique was 43.0% for grade I adenomyosis, 59.5% for grade II adenomyosis. for grade III adenomyosis – 97.5%.

Conclusion

Thus, the analysis of the presented data indicates that the sensitivity and specificity of hysteroscopy are far from the parameters of the "gold standard" in the diagnosis of early stages of adenomyosis. Standard ultrasound, which includes numerous high-quality ultrasound signs, also does not have sufficient sensitivity and specificity for the diagnosis of grade I adenomyosis, which confirms the literature data on the lack of effective methods of early verification of adenomyosis at the preoperative stage.

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References:

1. Zondervan K.T., Becker C.M., Missmer S.A. Endometriosis. N. Engl. J. Med. 2020;382(13):1244–56. DOI: 10.1056/NEJMra1810764
2. Hill C.J., Fakhreldin M., Maclean A., Dobson L. et al. Endometriosis and fallopian tubes: theories of origin and clinical implications. J. Clin. Med. 2020;9(6):1905. DOI: 10.3390/jcm906 1905
3. Parazzini F., Esposito G., Tozzi L., Noli S. et al. Epidemiology of endometriosis and its comorbidities. Eur. J. Obstet. Gynecol. Reprod. Biol. 2017;209:3–7. DOI: 10.1016/j.ejogrb.2016.04.021
4. Gambadauro P., Carli V., Hadlaczky G. Depressive symptoms among women with endometriosis: a systematic review and meta-analysis. Am. J. Obstet. Gynecol. 2019;220(3):230–41. DOI: 10.1016/j.ajog.2018.11.123
5. As-Sanie S., Black R., Giudice L.C., Gray Valbrun T. et al. Assessing research gaps and unmet needs in endometriosis. Am. J. Obstet. Gynecol. 2019;221(2):86–94. DOI: 10.1016/j.ajog.2019.02.033
6. Škegro B., Bjedov S., Mikuš M., Mustač F. et al. Endometriosis, pain and mental health. Psychiatr. Danub. 2021;33(suppl.4):632–6.
7. Casalechi M., Vieira-Lopes M., Quessada M.P., Arão T.C. et al. Endometriosis and related pelvic pain: association with stress, anxiety and depressive symptoms. Minerva Obstet Gynecol. 2021;73(3):283–9. DOI: 10.23736/S2724-606X.21.04704-3
8. Walker A.K., Kavelaars A., Heijnen C.J., Dantzer R. Neuroinflammation and comorbidity of pain and depression. Pharmacol. Rev. 2013;66(1):80–101. DOI: 10.1124/pr.113.008144
9. Harsanyi S., Kupcova I., Danisovic L., Klein M. Selected biomarkers of depression: what are the effects of cytokines and inflammation? Int. J. Mol. Sci. 2022;24(1):578. DOI: 10.3390/ijms24010578
10. Nabi M.Y., Nauhria S., Reel M., Londono S. et al. Endometriosis and irritable bowel syndrome: a systematic review and meta-analyses. Front. Med. (Lausanne). 2022;9:914356. DOI: 10.3389/fmed.2022.914356
11. Baker J.M., Al-Nakkash L., Herbst-Kralovetz M.M. Estrogen-gut microbiome axis: physiological and clinical implications. Maturitas. 2017;103:45–53. DOI: 10.1016/j.maturitas.2017.06.025
12. Rowlands I.J., Hockey R., Abbott J.A., Montgomery G.W. et al. Body mass index and the diagnosis of endometriosis: findings from a national data linkage cohort study. Obes. Res. Clin. Pract. 2022;16(3):235–41. DOI: 10.1016/j.orcp.2022.04.002.

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