**Gayvoronskaya S.,** Candidate of Medical Sciences,

Associate Professor,

Associate Professor at the Department of Obstetrics and Gynecology № 2

**Starkova I.,** Candidate of Medical Sciences,

Associate Professor,

Associate Professor at the Department of Obstetrics and Gynecology № 2

**Tykhanskyi D.,** Student of Medical Faculty

*Kharkiv National Medical University Kharkiv, Ukraine*

**THE INTERCONNECTION OF ENDOMETRIOSIS AND INFERTILITY**

When endometrial heterotopy spreads on the tissue of ovaries occurs endometrial cyst (endometrioma). Endometrioma leads to reduction of ovarial reserve and infertility. Leading symptoms in the clinic of endometriosis of ovaries are algodismenorrhea, anomalous uterine bleedings and infertility [3, p. 192; 4, p. 739]. The prevalence of endometriosis among females worldwide amounts to 7–10% and among in-fertile females the incidence of endometriosis amounts to 20% up to 50% that proves the research relevance.

**Objective:** to ascertain the interconnection between the appearance of antibodies to the Thomsen-Friedenreich antigen and hormonal changes of patients with endometrial cysts of ovaries and determine the influence of this data on fertility.

**Methods:** the experimental group consists of 56 women with endometrial cysts of ovaries, suffering infertility. Control group consists of 10 somatically healthy women. All the women were of the same age (25–40 years). The life anamnesis, so-matic, obstetric and gynecological histories analysis were made. Endometrioma was diagnosed according to clinical symptoms (pelvic pain syndrome, abnormal uterine bleedings, algodismenorrhea), data of gynecological, ultrasound examination, dop-plerometry and histologically confirmed during the operative treatment.

The hormonal state of all patients was examined (Follicle-stimulating hormone (FSH), luteinizing hormone (LH) on 2–7 days of menstrual cycle, Anti-Mullerian hormone (AMH)). All patients were examined for antibodies to the Thomsen-Friedenreich antigen (T – antigen).

In addition, 16 women of experimental group (28%) on suspicion of adenomiosis underwent hysteroscopy, followed by biopsy. 45 patients (80%) underwent laparo-scopic cystectomy with chromosalpingography and further biopsy of the removed endometrial cysts.

**Results.** During the hormonal examination 31 women (55%) had an increase of the FSH level (14,2±0,4 mIU/ml at the rate 1,3-9,9 mIU/ml, р<0,05) and decrease of the LH level (0,95±0,2 mIU/ml at the rate 1,67 – 15,0 mIU/ml, р<0,05). This data correlated with decrease of the AMH level (0,23 ± 0,13 ng/ml at the rate 1,0 – 2,5 ng/ml, р<0,05) 39 women (69%) had an occlusion of the fallopian tubes, as a result of heterotopias’ invasion during the laparoscopic cystectomy with chromosalpingography. 7 women (12,5%) had an obliteration of the fallopian tubes because of peritubal adhesions and apparent commissural process in abdominal cavity. All the patients were confirmed with the diagnosis of endometriosis during histological examination. 45 women (80%) of experimental group had antibodies to T-antigen.

There were no abnormalities detected during such hormonal and instrumental examinations in the control group. Also, they had no antibodies to the T-antigen.

**Conclusions.** Based on the received data, we can consider that occurrence of infertility during the endometrial cysts of ovaries depends both on the decrease of ovarial reserve and changes of hormones, and on the abnormality of fallopian tubes patency. The detection of antibodies to the Thomsen-Friedenreich antigen within in-fertile patients demonstrates high specificity of endometriosis diagnosing.

**References:**

1. Зыкин Б.И., Буланов М.Н. Опухолевидные образования яичников / Доппле-рография в гинекологии.// 1-е издание. – М. РАВУЗДПГ. – Реальное время. – 2000. – С. 99–106.

2. Dogan MM., Ugur M. Transvaginal sonographic diagnosis of ovarian endometri-oma / Dogan MM., Ugur M., Soysal SK., Soysal ME., Ekici E., Gokmen O // Int J Gynaecol Obstet. – 1996. – № 52(2). – P. 145–9.

3. Kurjak A., Kupesic S., (Ed.) An atlas of transvaginal color Doppler./ Second edi-tion // The Parthenon publishing group. – New York., London. – 2000. – P. 192.

4. Patel MD., Feldstein V.A. Endometriomas./ Patel MD., Feldstein V.A, Chen DC., Lipson SD., Filly R.A. // Diagnostic performance of US. – Radiology. – 1999. – № 210(3). – P. 739–45.