

TOM LXXII, 2019, Nr 4, KWIECIEŃ/APRIL

cena 30 zł
(w tym VAT)

Wiadomości Lekarskie



Czasopismo Polskiego Towarzystwa Lekarskiego

Rok założenia 1928

ISSN 0043-5147



CZASOPISMO INDEKSOWANE W PUBMED/MEDLINE, EBSCO, INDEX COPERNICUS oraz MNiSW (11 pkt), SCOPUS
I POLSKIEJ BIBLIOGRAFII LEKARSKIEJ

Wielka Księga Balneologii, Medycyny Fizykalnej i Uzdrowiskowej

Tom I
Część
ogólna

Tom II
Już
dostępny!

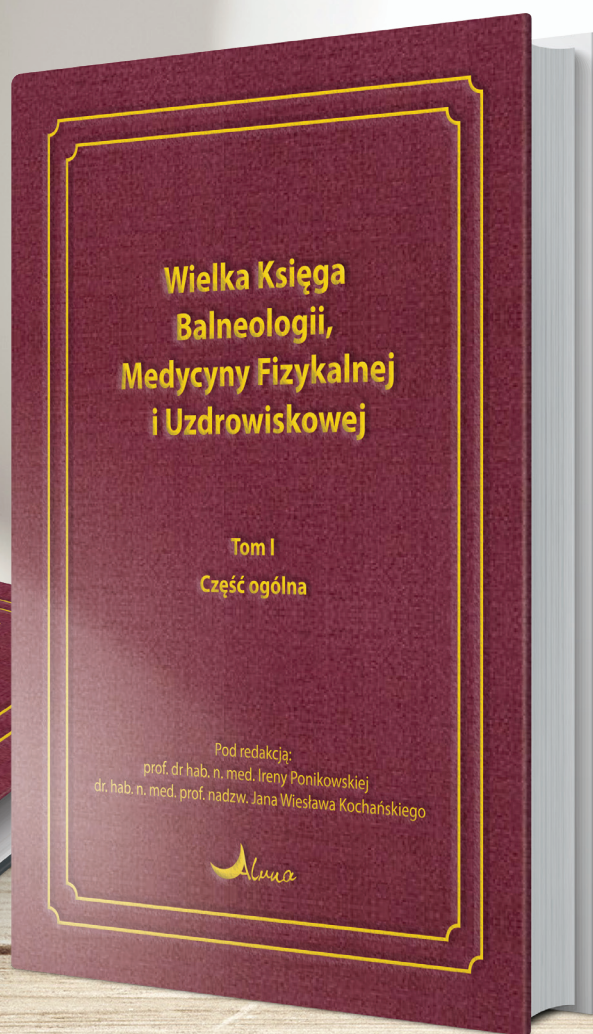
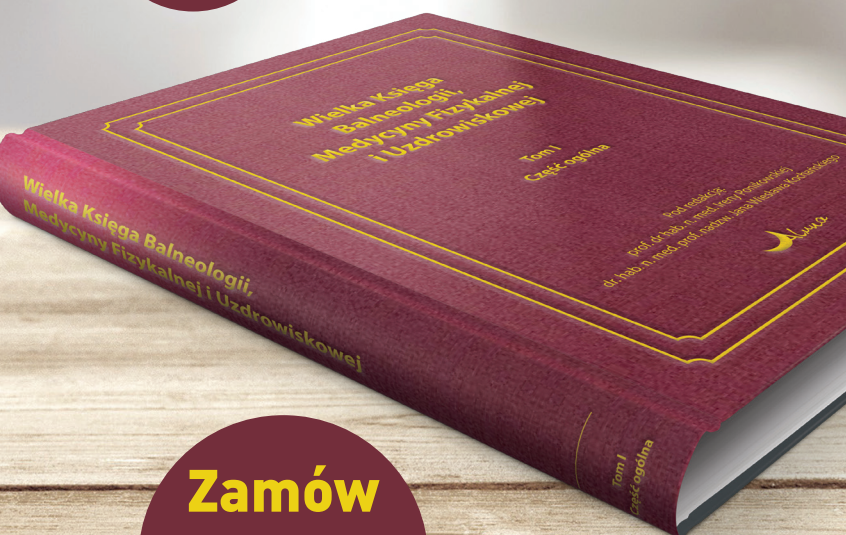
Pod redakcją:
prof. dr hab. n. med. Ireny Ponikowskiej
dr. hab. n. med. prof. nadzw. Jana Wiesława Kochańskiego

ponad
830
stron

32
znamienitych
autorów

Złote
tłoczenia,
oprawa
szyta niemi

10
zagranicznych
autorów



**Zamów
już
dzisiaj!**

www.wielkaksiegabalneologii.pl

Victoria S. Sukhan ALLERGIC RHINITIS AND ASTHMA CO-MORBIDITY	622
Oleksandr V. Likunov, Nataliya R. Prisyazhna, Andriy V. Ratushnyuk, Pavlo I. Nikulnikov IMPROVEMENT OF THE METHODS OF SURGICAL TREATMENT IN PATIENTS WITH INFRALENALE ANEURYSM OF THE ABDOMINAL AORTA	627
Sergii D. Khimich, Orest M. Chemerys ROLE OF THE FAMILY PHYSICIAN IN THE TREATMENT OF PATIENTS WITH POLYTRAUMA ON THE OBESITY BACKGROUND ON AN AMBULATORY STAGE	631
Natalia V. Zhovanyk, Mariana I. Tovt-Korshynska INTERACTION BETWEEN CLINICAL AND PSYCHOLOGICAL CHANGES AMONG PATIENTS WITH CHRONIC OBSTRUCTIVE PULMONARY DISEASE AND PULMONARY TUBERCULOSIS CO-MORBIDITY	635
Sergiy I. Ivashchuk, Larysa P. Sydorчук THE PARAMETERS OF LIVER FUNCTIONAL STATE AS A RISK FACTOR OF EDEMATOUS PANCREATITIS DEVELOPMENT PROVIDING OF GENETIC DETERMINATION OF IL-4 PRODUCTION	639
Khrystyna B. Kvit, Natalya V. Kharchenko, Vyacheslav V. Kharchenko, Olga I. Chornenka, Romania I. Chornovus, Uljana S. Dorofeeva, Oksana B. Dragančuk, Oksana M. Slaba THE ROLE OF SMALL INTESTINAL BACTERIAL OVERGROWTH IN THE PATHOGENESIS OF HYPERLIPIDEMIA	645
Snizhana V. Feysa, Ivan V. Chopei COMORBIDITY SEVERITY INDEX AS A NEW TOOL FOR ASSESSMENT OF CO-EXISTING DISEASES IN PATIENTS WITH NON-ALCOHOLIC FATTY LIVER DISEASE AT THE CARBOHYDRATE METABOLISM DISORDER BACKGROUND AND CONCOMITANT SUBCLINICAL HYPOTHYROIDISM	650
Oksana V. Bakun, Oksana I. Yurkiv, Ksenia V. Slobodian, Oksana V. Kolesnik, Aliona V. Maruschak THE LEVEL OF SOME HORMONES IN THE BLOOD WOMEN WITH ENDOMETRIOSIS WHICH ASSOCIATED WITH INFERTILITY	654
Valentyna I. Velichko, Yana I. Bazhora, Galyna O. Danilchuk, Larysa I. Kolotvina PSYCHOEMOTIC FEATURES, STATUS OF COGNITIVE FUNCTIONS AND ASSESSMENT OF BRONCHIAL ASTHMA PATIENTS' QUALITY OF LIFE	657
Oleksandr Bredun, Oleg Melnikov, Oleksandr Kononov INTEGRAL SCORING SCALE AS A BASIS FOR AN OBJECTIVE ASSESSMENT OF THE STATE OF PATIENTS WITH CHRONIC TONSILLITIS AND THE EFFECTIVENESS OF THEIR TREATMENT	664
Natalia Y. Osovskaya, Yulia V. Mazur, Olga M. Bereziuk, Serhii P. Dmytryshyn, Maryna M. Velychkovych, Larysa A. Perebetiuk, Olena V. Temna, Oksana M. Honcharenko, Oksana V. Furman, Oleksiy R. Balatskyi CARDIOVASCULAR REMODELING IN PATIENTS WITH HYPERTENSION WITH DIFFERENT DEGREES OF COGNITIVE IMPAIRMENT	670
Iryna V. Chekhovska, Olha M. Balyńska, Roman I. Blahuta, Valeriy V. Sereda, Serhii O. Mosondz EUTHANASIA OR PALLIATIVE CARE: LEGAL PRINCIPLES OF THE IMPLEMENTATION IN THE CONTEXT OF THE REALIZATION OF HUMAN RIGHTS TO LIFE	677
PRACE POGLĄDOWE / REVIEW ARTICLES	
Volodymyr O. Shaprynskyi, Oleg Y. Kanikovskiy, Yevhen V. Shaprynskyi, Yaroslav V. Karyi EXPERIENCE IN TREATMENT OF PATIENTS WITH ESOPHAGEAL ACHALASIA	682
Borys O. Lohvynenko, Roman V. Myroniuk, Olexander P. Svitlychnyy, Aleksey Y. Prokopenko, Lidija I. Kalenichenko THE WAY THE HEALTH CARE SYSTEM IN UKRAINE LOOKS LIKE: INTERNATIONAL PRACTICES WITHIN NATIONAL REALITIES	685
Tetyana B. Vilchik, Hrihorii S. Krainyk, Oleksandr O. Shandula LEGAL ENFORCEMENT AND DEVELOPMENT DIRECTIONS OF HEALTH LAW IN UKRAINE	692
Natalia V. Nikitchenko, Andrii M. Khankevych, Dmytro V. Slynko, Tetiana I. Savchuk, Viktor V. Lazariev A MEDICAL ERROR: DOES LAW HELP OR HINDER	697
Natalia Y. Lemish MODERN METHODS OF GREAT OBSTETRICAL SYNDROMES PROGNOSTICATION (LITERATURE REVIEW)	702
Nadiia V. Shulzhenko LEGAL BASES FOR IMPROVING LEGISLATION ON THE TRANSPLANTATION OF HUMAN ANATOMICAL MATERIALS	707
Vladislav I. Teremetskyi, Serhii V. Knys, Vasyl M. Stratonov, Oleksandr M. Khrantsov, Mykola V. Stashchak ORGANIZATIONAL AND LEGAL DETERMINANTS OF IMPLEMENTING INTERNATIONAL EXPERIENCE IN THE HEALTH CARE SECTOR OF UKRAINE	711
Nadiya B. Kuryltsiv, Kateryna M. Halei THE ROLE OF INTERLEUKINS AND THEIR INHIBITORS IN THE DEVELOPMENT OF AUTOIMMUNE UVEITIS	716
OPIS PRZYPADKU / CASE REPORT	
Ivan P. Katerenchuk, Lidija A. Tkachenko, Tetyana I. Yarmola, Viktoriya V. Talash, Savetik T. Rustamyan, Anna L. Pustovoyt, Oleksandr I. Katerenchuk CHURG-STRAUSS SYNDROME: CLINICAL CASE AND ITS FEATURES	723

PRACA ORYGINALNA
ORIGINAL ARTICLE

THE LEVEL OF SOME HORMONES IN THE BLOOD WOMEN WITH ENDOMETRIOSIS WHICH ASSOCIATED WITH INFERTILITY

Oksana V. Bakun, Oksana I. Yurkiv, Ksenia V. Slobodian, Oksana V. Kolesnik, Aliona V. Maruschak

HIGHER STATE EDUCATIONAL INSTITUTION OF UKRAINE "BUKOVINIAN STATE MEDICAL UNIVERSITY", CHERNIVTSI, UKRAINE

ABSTRACT

Introduction: The work has been dedicated the study of pituitary hormone concentration in the blood of women with endometriosis-associated infertility on 2-3 days of the menstrual cycle and the day of the puncture of ovarian stimulation superovulation in the cycle.

The aim of our study was to examine the concentration of pituitary hormones in the blood of women with endometriosis associated with infertility.

Materials and methods: For the purpose of the research we have conducted a special study of protein (lutropin - LH, folitropin -FSH) hormones level in the blood plasma of women with endometriosis associated with infertility, which formed the main group of 20 people. Similar studies of protein hormones level were performed in the control group, which made somatically healthy women of reproductive function preserved, whose age corresponded to the age of patients of the main group.

The value of p (authenticity difference) was determined by Student's table-Fischer. Differences between contrasting averages were considered significant at $p < 0.05$.

Results and conclusions: Analyzed the results of our research stated that women with endometriosis associated with infertility 2-3 days of the menstrual cycle endocrine function of gonadotropocytes anterior pituitary did not differ from that of the control group. This fact appeared to have an additional criteria for the formation of a main group. In patients with endometriosis associated with infertility found significant violation of rhythm and secretion of blood gonadotropin hormones that are proportionate to the degree of severity of the disease.

KEY WORDS: pituitary hormones lutropin, folitropin, infertility, endometriosis

Wiad Lek 2019, 72, 4, 654-656

INTRODUCTION

Most authors consider that the products lutropina (LH) and folitropi (FSH) is different types of cell functional activity which is controlled by a common releasing hormone [1].

Despite the existence of a general stimulator of the hypothalamic gonadotropin products, the degree of response of the pituitary to effect uniform for LH and FSH [2,3]. These differences are found in the analysis of the dynamics of gonadotropin secretion during the menstrual cycle. The secretion of FSH are known to actively growing at the beginning of the menstrual cycle, so that the value of the basal secretion of the hormone in the early folliculin phase of the cycle several times higher than that in the luteal phase [4]. In preovulation period under the influence of higher concentrations of estradiol concentration of FSH falls, then there ovulatory hormone release. In contrast, FSH, LH secretion increases slightly at the beginning of the cycle and is virtually identical to the luteal phase [3]. One of the reasons disorders inducing folliculogenesis in vitro fertilization programs are spontaneous LH secretion peak, accompanied by accelerated maturation of oocytes and consequently the start of luteinization before the estimated time of ovulation [5,6]. This may be accompanied by the abolition treatment cycle due to the inability of oocyte insemination or embryo transfer rejection of due to their possible morphological defects [1,3,7].

THE AIM

The aim of our study was to examine the concentration of pituitary hormones in the blood of women with endometriosis associated with infertility.

MATERIALS AND METHODS

For the purpose of the research we have conducted a special study of protein (lutropin - LH, folitropin -FSH) hormones level in the blood plasma of women with endometriosis associated with infertility, which formed the main group of 20 people. Similar studies of protein hormones level were performed in the control group, which made somatically healthy women of reproductive function preserved, whose age corresponded to the age of patients of the main group.

In the study (women with infertility) and control groups conducted a special study of protein (lutropin - LH, folitropin -FSH) hormones level in the blood plasma of 2-3-day menstrual cycle - basic and on the day of the puncture of ovarian stimulation cycle in superovulation. The level of hormones measured by ELISA using a set of reagents for quantitative ELISA determination of hormones in blood serum:

- „IFA gonadotropin-FSH”;

- „Gonadotropin-LH ELISA.”

The value of P (authenticity difference) was determined by Student's table-Fischer. Differences between contrasting averages were considered significant at $P < 0.05$.

Table 1. The concentration of pituitary hormones level in the blood of women on 2-3 days of the menstrual cycle ($M \pm m$)

Index	Main group (n=20)	Control group (n=20)	p
LH pg / ml	5,8±1,70	6,22±1,21	>0,05
FSH pg / ml	10,0±1,10	9,92±1,03	>0,05
LH / FSH	0,58	0,63	

Table 2. The concentration of pituitary hormones in the blood of women on the day of the puncture of ovarian stimulation superovulation in the cycle ($M \pm m$)

Index	The main group in stimulated cycle (n = 20)	Control group (n=20)	p
LH pg / ml	1,08 ± 0,06	16,2±5,27	<0,001
FSH pg / ml	10,7±1,16	7,05±0,8	<0,05

RESULTS AND DISCUSSION

The results that we obtained in the study of basic hormones are presented in Table 1.

Analyzed the results of our research are presented in table I stated that women with endometriosis associated with infertility 2-3 days of the menstrual cycle endocrine function of gonadotropocites anterior pituitary did not differ from that of the control group. This fact appeared to have an additional criteria for the formation of a main group.

LH level at 2-3 second day of the menstrual cycle in women with infertility different from indicators in the control group slightly. LH to FSH ratio in the study and control groups was within 0,58-0,63.

According to the literature [1,7] ratio LH / FSH ranges in healthy women within 1.5-2.0. In our patients as the control group and the main factor is now slightly below that can explain the features of the methodology for determining the level of hormones in blood plasma. We used method of determining the amount of hormone (pg / ml), while in a number of laboratories measured activity in international units (IU / L).

Changes in hormonal profile in women with endometriosis associated with infertility and the control group in the study day puncture of ovarian stimulation superovulation in the cycle shown in Table 2.

Attention is drawn to the fact that our patients at an altitude of superovulation stimulation stated statistically significant reduction in the level of luteinizing hormone $16,2 \pm 5,27$ to $1,08 \pm 0,06$ pg / ml.

This reduction in blood lutropin be explained reciprocal dependence between synthesis and activity of estradiol vertical luliberin-lutropin-progesterone.

Along the surveyed women was found a slight increase of folitropin of $7,05 \pm 0,8$ to $10,7 \pm 1,16$ likely due to circulating levels of outside administered hormone. Value LH / FSH was respectively: 0.1 stimulated cycle; 2.2 in the control group. This is quite important because the normal functioning of the ovaries is possible only at a ratio of LH / FSH 1-1.5.

Reduced secretion of LH in patients with infertility weakens the predecessor synthesis of steroid hormones. Consequently, reduced production of androgens in the ovary.

It is known [5] that ovulatory peak corresponded almost 6-fold increase in the concentration of estradiol. Increased concentrations of estrogen and could be seen as an incentive to the sharp increase in the secretion of LH and FSH, which appears on the before of ovulation.

But in our studies LH level, on the contrary, decreased FSH and elevated, suggesting the lack of response to ovarian stimulation, and the possibility of damage to the follicular unit by chronic inflammation and autoimmune process.

Reducing the concentration of LH in patients with infertility of tubal origin in folikulin phase of the menstrual cycle and lack of concentration of FSH lead to a breach of folliculogenesis, ovulation and subsequent rearrangements of secretory endometrium. This, in turn, may still be one of the causes of infertility. Reducing LH can be explained by the fact that necessary for secretion of FSH and LH should pulsing emissions gonadotropin-releasing hormones by hypothalamus is not all gonadotrophic adenohipophysis receptors connected to one pulse of gonadotropin-releasing hormone and adenohipophysis cells are able to respond to further release of gonadotropin-releasing hormone. Due to reduction of LH levels there is blockage of the functional activity of the ovaries, which may be accompanied by a further decline in estradiol concentrations in the blood.

CONCLUSIONS

Thus, in patients with endometriosis associated with infertility found significant disorders of rhythm and secretion of blood gonadotropin hormones that are proportionate to the degree of severity of the disease. Thus, basal levels of LH and FSH hardly different from the targets, and the folikulin phase of the menstrual cycle decreased concentrations of LH to normal levels of FSH background. However, despite the presence of abnormalities in the secretion of gonadotropin hormones compensation body's response in this disease provide a state of homeostasis because ovulation in 2/3 patients retained, while the reproductive function is much impaired.

REFERENCES

1. Smolnykov V.Yu., Fynohenova E.Ya. Ekstrakorporalnoe oplodotvoreniye y eho novye napravlianiya v lechenyy zhenskoho besplodyia. Pod red. V.Y. Kulakova, B.V. Leonova. 2000; 91-135
2. Экстракорпоральное оплодотворение y eho новые napravleniya v lechenyy zhenskoho y muzhskoho besplodyia Pod red. V.Y. Kulakova, B.V. Leonova: MYA, 2000; 781
3. Nazarenko T.A., Durynian E.R., Zuriaeva N.A. Endokrynnoe besplodye u zhenshchyn: dyahnostyka y lechenye. Prakticheskoe rukovodstvo. 2010;80
4. Yavorskaia K.A. Ekstrakorporalnoe oplodotvoreniye y eho novye napravleniya v lechenyy zhenskoho y muzhskoho besplodyia. Pod red. V.Y. Kulakova, B.V. Leonova. 2000; 12: 291-317.
5. Kalynyna E.A. Optymyzatsiya protsedury ekstrakorporalnoho oplodotvoreniya y perenosy embryona pry syndrome polykystoznykh yaychnykov. Probl. reproduktsyy. 2002;(3): 81-83.
6. Leonov B.V., Kulakov V.Y., Fynohenova U.Ya., et al. Yspolzovanye preparata rekombynantnoho FSH (follytropyna-) pry lechenyy besplodyia v prohrammakh EKO y PE. Akush. y gyn.2001;(6):35-40.
7. Smolnykova V.Yu. Opyt prymereniya honadolyberyna dyferelyna v prohramme ekstrakorporalnoho oplodotvoreniya. Hynekolohiya.2004;6 (3): 109-111.

Authors' contributions:

According to the order of the Authorship.

Conflict of interest:

The Authors declare no conflict of interest.

CORRESPONDING AUTHOR

Oksana Bakun

Bukovinian State Medical University

Pavla Chubinskogo Street 7/12, 58000 Chernivtsi, Ukraine

tel: +380505627338

e-mail: kupchanko06@gmail.com

Received: 09.03.2019

Accepted: 05.04.2019