SUMMARY

DOCTORAL THESIS

CONTRIBUTION TO THE STUDY OF GENITO-VAGINAL DISCHARGE/SECRETION TO INCARCERATED WOMEN. CYTOLOGICAL AND CLINICAL STATISTIC STUDY.

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KEYWORDS

FSH .................. Follicle Stimulating Hormone
LH.................. Luteinizing Hormone
LTH.................. Luteinizing Tropin Hormone
GnRH................. Gonadotropin Releasing Hormone
LRH.................. Luteinizing Releasing Hormone
ER..................... Emergency Room-casuality
SHBG............... Binding globulin
ACTH................ Adreno CoticoTropic Hormone
TRH.................. Thyrotropin Releasing Hormone
PRF................... Prolactin Releasing Factor
RH.................... Releasing Hormone
CSR................... Adrenal glands
INTRODUCTION

The Hypothalamus, situated at the base of the diencephalon, under the thalamus, near the third ventricle is a genuine relay station on the sensitive and sensorial ways, playing the role of an integration centre role for the main vegetative functions through the different centres that exist in its structure, centres whose excitability threshold is permanently modified by the brain cortex.

When it comes to the regulation and coordination of main vegetative functions of the organism, which the hypothalamic centres carry out, an important consideration, should be also given to the regulation of the sexual activity as well as the emotional or affective reactions.

The excitement coming from the external environment and received by the brain cortex are transmitted to the sexual organs via the hypothalamus network –adenohypophysis which via the Gonadotrop hormones control the endocrine activity of the ovary and, implicitly, the sexual cycle.

Plying at the same time an important role in the emotional acts like: stress, negative emotions, fear or apprehension which represent organism’s defence answer in front of threatening factors from the external environment and which are coordinated by the hypothalamus and the limbic system, the hypothalamus via the hypothalamic hormones for release and inhibition produced by neurosecretory cells from its different nucleus may vary the hormonal secretion by the adenohypophysis.

With the same mechanism is also influenced the gonadotrop hormone secretion, foliculinstimulina, FSH, luteinostimulina, LH or prolactine, LTH, whose level triggers modifications of ovulation or of the secondary sexual characteristics.

The hypothalamic gonadotrop hormones’s secretion is stimulated by GnRH (Gonadotropin releasing hormone) also called LRH due to its predominant action on LH. Synthesized in different hypothalamic nucleus it stimulates in an undifferentiated manner the adenohypophysis FSH and LH secretion. The physical secretion is determined by the quantity of gonadic circulating hormones that have a negative or positive feedback reaction.

Also, the neurosecretor hypothalamic cells are stimulated or inhibited by different factors with or without specific significance through the external and internal. Their effect appears finally through neuro mediators such as dopamine, noradrenalin, or serotonin. So, the nervous stimulus is transmitted to the hypothalamus and the hypophysis anterioara wich triggers the ovulation on humoral way. The hypothalamus influences ovulation, one can say that the menstrual cycle depends also on ecological-social environment factors.

Based on this data and also observing for more than three years patients who were in different periods of freedom privacy and who did not have an active family life, being at the same time under prison stress, I realised this study in order to emphasize some clinic and cytological aspects regarding the alterations of the vaginal epithelium in another environment then the normal one.

The study was realised on 220 women who were in prison in the Penitentiary Hospital Rahova, during 2005- 2008, the detention period varied. The clinical aspects were evaluated based on the existing data in the personal charts of these women, charts offered by the OB section of the hospital, as well as the cytological aspects obtained after examining the cervical-vaginal frotiu that existed in the archives of the hospital.

MATERIALS AND METHODS

A study on 220 women with ages between 19 and 71 years of age convicted for different minor offences or penal offences, imprisoned in different women facilities
throughout the country and transferred to the Penitentiary Hospital Rahova in order to be treated for various diseases, was taken into consideration.

The Group was observed and studied during a period of 4 years (2005-2008) during hospitalisation in the Penitentiary Hospital as well as through the medical offices in the women’s penitentiary where some of them ended up after hospitalisation.

In order to better emphasize the modifications interesting for this study, during different periods of time, the group was divided in three groups according to the detention period they had to go through.

So, the patients were grouped, according to the detention period, in three categories: 6-12 months of detention- 50 women, 12-36 months of detention- 100 women and 36-60 months of detention -70 women. After analyzing the above mentioned data in the personal charts, considered to be recoltare date and correlated with the date when these women were incarcerated, it proved out that for all imprisoned women, the recoltare date was after two thirds of their punishment was over.

The study consisted of, on one hand, the evaluation of the clinical data obtained from the women’s observation files, that existed in the Rahova Penitentiary archives (clinical-statistic study) (see table 1), and on the other hand the analysis of the cytological aspects on the cervical-vaginal smear recoltate to these women during the Babes-Papanicolau (Pap smears) test made during detention (cytological study).

From a clinical-statistic point of view parameters related to age, detention period and clinical diagnosis were evaluated.

For the cytological study cytological aspects were evaluated from smears taken from 170 women, the smears being recoltate, the smears being recoltate during the clinical test done after two thirds of the detention period had gone by. For the other 50 women the cytological test could not be done due to recoltare artefacts and smear fixing.

The smears were recoltate using the tradition spatula Ayre, the sampled material was then spread on two smears: one from the exocervix level ad the other one from the endocervix level. The smears were fixed wet, in absolute ethylic alcohol, for ten minutes ant then they were coloured using the Papanicolau method.

Based on the cell aspects, the cytological result was correlated to the patients’ age and, as much as possible, to the detention period. The cytological aspect was formulated according to the Bethesda classification.

The obtained cytological results in this study were analysed in comparison with normal cytological aspects in free women.

RESULTS

V. 1. RESULTS OF CLINICSL-STATISTIC STUDY

A study on 220 women with ages between 19 and 71 years convicted for different minor offences or penal offences, imprisoned in different women facilities throughout the country and transferred to the Penitentiary Hospital Rahova in order to be treated for various diseases, acute or chronic, was taken into consideration.

Based on the anamnesis and clinical data obtained from the observation charts, out of the total number of 220 imprisoned women 160 were taken into the study that presented, when imprisoned, menstrual cycle. Out of these 133 had monthly regular period and 27 had irregular period, twice a month or even once every two, three, four months. The irregularity of the menstrual cycle was, later on, after clinical and Para clinical investigations, associated to different gynaecological diseases. When imprisoned, it was discovered 60 women presented primary or secondary physiological amenorrhea after different diseases and interventions like: total or subtotal hysterectomies, ovarian cysts or polycystic syndrome, polipomatoza endocervix, etc.

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The researched group was made of women between 19-71 years, the most numerous group was the one with women between 31-40 years 78 women, then the group with women of 41-50 years old-43 women, age between 51-60 years-45 women and age between 21-30 years-32 women.

The age group 31-40 years is the most likely to have modifications of the vaginal cytology, as a result of the hypothalamus-hypophysis generated by the imprisonment shock, also because the offences they committed expose them to restrictions on a larger period of time in detention.

So, out of the 220 cases three groups were made. In the 1st group with detention period 6-12 months I identified 31 women with regular monthly menstrual cycle, 7 women with irregular menstrual cycle and 11 women with no menstrual cycle. In the second group with detention period 12-36 months I identified 54 women with monthly regular menstrual cycle, 10 women with irregular menstrual cycle and 32 women with no menstrual cycle. And, in the third group with detention period between 36-60 months there were 48 women with regular monthly menstrual cycle, 10 women with irregular menstrual cycle and 17 women with no menstrual cycle.

V. 2. CYTOLOGICAL STUDY RESULTS
The cytological study consisted in the evaluation of the cytological and cytohormonal aspects of the smears that were recollected to women when they were incarcerated. So, the types of cells on the smears, the way they were displayed, if they were or not associated with inflammation as well as their association with the presence of microorganisms such as: Candida, Trichomonas, Gardnerella.

In this study the smears were divided into two large groups of cytological diagnosis: in normal limits (140 women, 82, 35%) and atrophic smear (30 women, 17, 65%).

55 women, 32, 35% of the women with normal cytological aspects presented hormonal environment predominant estrogenic (table 9) and the rest, 85 women, 50% presented predominant progesterone hormonal environment.

18 women, 32, 73% of the women who presented predominant estrogenic hormonal environment, the smear found was clean, with no inflammations and the rest of 37 women, (62, 27%) an inflammatory exudation in variable quantity from one smear to another.

The cytological exam emphasized in all these cases the presence of superficial and intermediary cells, predominant being the eosinophile superficial ones, displayed isolated or in small groups, with very well exposed margins without plicaturari and with variable number of polymorphonuclear leucocytes.

Although the cytological-hormonal could not be done on the smears with inflammatory exudation, this was taken into consideration in the hormonal evaluation, the aspect of the cells and the way they are distributed was evaluated.

So, in the case of the presence of inflammatory exudation on the smears, 27 women (49, 09%) this was in an inflammatory non specific process associated with different inflammatory diseases of the genital feminine tract of the respective women.

With the other 10 women it was noticed that the presence of the inflammatory exudation on the smears was due to an infectious process given by: infection with Candida in 6 women, infection with Trichomonas in 2 women and Gardnerella with other 2 women.

Analysing the distribution on the age groups of women with hormonal environment predominant estrogenic, I noticed that more than half of the women, 31 women (56,36%) had young ages between 31-40 years, 8 women were younger than 31 years of age (14, 55%) and the rest of 16 women could be categorized into the 41-50 years old group -13 women (23, 64%) and respectively over 50 years old-3 women (5, 45%).

Still, a large number of women, 16, (29, 09%) were over 41 years old, out of which 3 older than 50 years old.
This aspect is somewhat inconsistent with the ages, considering the fact that after the age of 50 the ovarian activity reduces more and more, which results in a reduction of the estrogenic hormonal secretion. But, analysing the concordance between the cytological aspects and the clinical diagnosis was noticed that 7 women had uterine fibroma, 8 presented an associated inflammation and another woman had genital prolapse.

On the smears of the women with associated inflammation we discovered that the eozinofile of the pavimentoase cells was presented both in the superficial cells as well as in the intermediary cells was inadequate for the cytological-hormonal evaluation. That’s why this fake eozinofile was considered to be produced by inflammation although in all the intermediary cells were predominant on the smears.

Out of the 55 women with predominant estrogenic environment, during the gynaecological exam we discovered that the majority of women, that is 38 women, had a diverse inflammatory pathology starting with vaginitis all the way to (metroanexitis) inflammation of uterus and the Fallopian tubes, 11 women did not have any pathology and 6 women had uterine fibroma or different fibromas constituted.

Due to the fact that when the sample prelevation took place the day of the period was not stipulated a correlation between the cytological diagnosis and the period of menstrual cycle. Still, in the charts of these patients data regarding presence of menstrual cycle were found at the end of the study, so a correlation between this and the cytological aspect was made.

So, 38 women had regular menstrual cycle present at the end of the study, 2 women had irregular menstrual cycle ant the other 15 did not have menstrual cycle at all. The presence of the hormonal environment predominant estrogenic was normal with women who still had menstrual cycle. For the women that had irregular menstrual cycle we cannot correlate the cytological aspect and the presence of the menstrual cycle. That is due to the fact that we do not know the day when the smears were recoltate and the hormonal modifications could also have been in the context of physiological modifications determined by the fact that they were incarcerated.

Evaluating the distribution of women, according to the detention period we discovered that the most women had to fulfil a punishment varying between 12-36 months (26 women) and the rest of 29 women the detention period was between 6-12 months (13 women) and between 36-60 months (16 women). Out of the women who had hormonal environment predominant estrogenic, at the end of the study, 38 women had regular menstrual cycle, 2 women had irregular menstrual cycle and the other 15 did not have menstrual cycle.

In this study 85 out of the 170 women, representing 50 % presented on the smears predominant progesterone hormonal impregnation. In these cases the cytological-hormonal examination emphasized superficial cells (most of them basophile, immature) and intermediary, the latter being predominant, the parabazal cells were rare and relatively frequent the polymorphonuclear leucocytes.

Analysing table 12 we notice that out of the 85 women with predominant progesterone hormonal impregnation, the majority with age between 31-40 years old, 32 women (37, 65%). Also, a representative number of women were placed in the group between 41-50 years old 819 women, 22, 36%9 and the age groups 21-30 and 51-60 had an almost equal number of women, that is 14 (16, 47%) and 15 women (17,65%). Only 5 women out of the group we studied were older than 61 years (5, 87%).

On the other hand, from the table one may notice that the cytological exam emphasized the presence of micro organisms such as Candida, Trichomonas and Gardnerella with 4,8 and respectively, 4 women.

Analysing the cytological aspect with the detention period we could observe that the distribution of women was approximately equal in all three groups. So, 39 women had to fulfil a punishment between 12-36 months, 27 women between 36-60 months and the rest of 19 women between 6-12 months.
Also, from the observation charts we noticed that at the end of the study the distribution of the women who had menstrual cycle and those who did not have menstrual cycle was approximately equal 42 women, respectively 33 women; the other 10 women had irregular menstrual cycle.

Out of the total number of women included in the study, 30 women (17, 65%) presented different degrees of atrophy of the vaginal epithelium. So, 13 women (43, 34%) the cytological aspect was atrophy without any other specifications, 7 women presented incipient atrophy (23,33%) and 10 women (33, 33%) presented severe atrophy.

As we may notice in table 15, the women with atrophic smear were between 28 and 67 years old, imprisoned for a period of time between 7 and 52 months. The gynaecological exam emphasized in principle different inflammatory diseases: vaginitis, cervicitis, chronic inflammation of the uterus and the Fallopian tubes.

Out of the 30 women with different atrophy degrees, 13 women presented atrophic smear without any other specifications. They were between 32 and 67 years old: only 4 women were younger than 40 years old (30,77%), 2 women (15,38%) were between 41 and 50 years old, 5 women between 51 and 60 years old (38, 47%) and the other 2 women were older than 61 years of age (15, 38%).

On these patients’ smears, during the cytological exam, the presence of the pavementosis cells in all layers was noticed, predominant being the ones in deep levels, some had slightly hyper atrophic nucleus; also, on the general environment of the smears could also be noticed the presence of an inflammatory exudation in small quantity, made of polymorphonuclear leucocytes and rare red cells.

On the smears of two of the women that had atrophic cytological aspect the presence of micro organisms such as Trichomonas was noticed, the women were older than 50 years that is 53 years old and respectively 51 years old.

As regards the imprisonment period the distribution of women according to it was the following: 2 women had a punishment between 6-12 months, 2 between 12-36 months and the majority, the rest of 9 women were incarcerated during a variable period between 36-60 months.

With the young patients the atrophic aspect was inconsistent with their age, being triggered by the hormonal changes due to lack of sexual activity, as well as the psychological context due to incarceration.

In the group of women who presented atrophy without any other specifications, 9 out of the 13 women did not have menstrual cycle at the end of detention and only 4 of these had irregular menstrual cycle. 2 women out the 4 were younger than 50 years and 7 were older than 50 years.

Also, 2 of the women who presented a certain degree of atrophy of the vaginal epithelium also presented on the smears a Trichomonas infection.

On the smears of a small group of women an incipient atrophy was emphasized for 7 women and two of these also presented on the smear an inflammatory exudation triggered by the presence of Candida and Trichomonas microorganisms with one woman and Gardenerella with the other. The cytological exam in these cases emphasized the presence of pavementosis cells from all layers with a slight predominance of the ones in deeper layer, on the smear fond being emphasized usually an inflammatory exudation of small quantity.

These women had ages between 28-50 years old being imprisoned during a variable period of time between 9-42 months. As we may notice, for most of these women (5) the detention period was between 12-36 months the other two women being incarcerated during a period of less than 12 months.

At the end of the study the period was absent for the majority of the women (5 women), 3 out of which were younger than 50, only 2 women being over 50 years old. Only one woman, 43 years old, incarcerated for 9 months, had irregular menstrual cycle, and for another woman there are no data known.
In this study, the severe atrophy was noticed in 10 women, 33.33%. As regards the distribution of women on age groups, their age varied between 30 and 57 years old, for most of them the detention period being quite high, over 36 months.

The majority of women with severe atrophy (8 women) had to fulfil a bigger punishment, more than 36 months and only 2 women were incarcerated for less than 36 months.

Regarding data about the menstrual cycle, at the end of detention period, 8 women did not have menstrual cycle at all, out of which only 2 were older, over 50 years old, and most of them, 6 women, were younger than 50. The other 2 women had irregular menstrual cycle at the end of this study, with long amenorrhea period, alternating with metroragy periods; they were 30 years old, respectively 32 years old.

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