JMA

Jurnal Medical Aradean (Arad Medical Journal)
Vol. XX, issue 2, 2017, pp. 21-30

AGING EFFECTS OF REPRODUCTIVE SYSTEM ON WOMEN IN ARAD COUNTY

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ABSTRACT. In a society trapped in an accelerated aging process, quality of life means getting more quality of life of those in the third period of life. It is necessary to undertake social action by all decisional agents and society in general, to ensure healthy aging, to quality life with the lowest social cost. A study was conducted in collaboration with the West University "Vasile Goldis ", Arad, the Cultural Centre County Arad and the County Council of Arad on a sample of 400 women aged between 41 and 80 years. Individuals were selected from both urban and rural areas as the study was applied on the entire county of Arad, which helped us highlight the lifestyle differences between the two areas. In quantitative research the instrument of investigation, the questionnaire, was individually applied by doctors and residents. Out of the 400 women studied, 318 gave birth vaginally (79.5%), 51 by caesarean section (12.75%) and 7.75% had no children (31 people). regarding the current state of the menstrual cycle, 107 people are premenopausal with regular cycles (26.75%), 39 women in perimenopausal period, called the transition, with irregular cycles, but which have not been 12 months without a menstrual cycle (9.5%) and the remaining 254 are postmenopausal women, representing a rate of 63.75%. 193 patients from a total of 400 tests were performed PAP test, which is a percentage of only 48.25%. We notice a fairly high incidence of urinary incontinence effort in the group of female population of 49.5%.The problems of old age and aging is and will be a generous field of study, and on current demographic conditions, even a first order requirement. Knowing all facets of old age, the joys and benefits, but also its pains and vulnerabilities, as well as knowing the real needs, but also those experienced by older people is a fundamental requirement of the policies based on the life quality. Also, knowledge on living conditions, lifestyle and possibilities of meeting the vital needs is an essential need for society as a whole, as long as aging is a natural phase of life, which no one can avoid.
KEYWORDS: ageing. Reproductive system, women's health

INTRODUCTION

Population aging is a change in a country's population distribution in favor of older people. This is reflected by an increase in the average age of the population, a decrease in the population consisting of children, as well as an increase in the proportion of the older population. Population aging is widespread throughout the world. This phenomenon is more advanced in developed countries.

Aging population comes from two demographic effects: increased longevity and decreased fertility. An increase in longevity is due to increased average age of the population because of the increasing number of elderly people. A decrease in fertility reduces the number of kids, thus reducing the number of young people. Of these two determinants, decreased fertility is the most important and the first that triggered this phenomenon by the globally large fall in the last half century. Since many developing countries are going through fast fertility transitions, they will experience aging faster than developed countries.

Biologically, aging is considered a phenomenon that occurs in almost all animal species, a result of the interaction of genetic, environmental and lifestyle factors which influences longevity. This process is causing an abnormal metabolism, certain destructions at a molecular level, of the structures, organs and body systems as well as age-related pathologies (Perez et al, 2007). Aging is a natural and inevitable biological process that begins at birth (Neubeck, 1997).

From a medical point of view, old age is a dystrophic state,an involution, which can be exacerbated by chronic diseases and therefore it's very important to establish the dissimilarity between normal and pathological aspects of aging (Sorescu M, 2005).

OBJECTIVES AND ASSUMPTIONS

A study was conducted in collaboration with the West University ,, Vasile Goldis ", Arad, the Cultural Centre County Arad and the County Council of Arad on a sample of 400 women aged between 41 and 80 years. Individuals were selected from both urban and rural areas as the study was applied on the entire county of Arad, which helped us highlight the lifestyle differences between the two areas.

The overall project goal was to appreciate the quality of women's urogenital function in Arad County.

We pursued the following main objectives:

- Identification and stratification of needs / problems that older people are facing in the county of Arad;
- The study of epidemiology, manner of occurrence, the clinical features and treatment of aging;
- The study of particularities in genital pathology on elderly correlated with other associated pathologies.
- Developing a multidisciplinary approach to geriatric service in Arad and promote proper attitudes regarding the aging process
- The introduction in the geriatric system of the idea of a multidisciplinary team providing medical, social and psychological care to elders;
- Improving the relationship between preventive primary medicine and ultra-specialty for providing complex, individualized medical care for each patient;
- Further development of partnerships between hospitals and public institutions, with a common goal: Improving the health and life quality in the geriatric system.

MATERIALS AND METHODS

Results are based on data obtained using several methods of research. This option has been imposed by the complexity of objectives, lack of statistics or, the low utility of existing data from public institutions and methodological principles that guide any research needs assessment - the validity of data and the need to involve the beneficiaries in establishing the problems.

Together with the sociological investigation, we used, in a complementary way the documents analysis (of the observation sheets for the people who were hospitalized or institutionalized, the blood tests, legislation and social politics of the field). Through the medium of observation, we observed the non-verbal particularities in behavior of the patients we interviewed and analyzed the lifestyle of older people. It's about an unstructured observation because we did not explicitly use plans for selection, recording and encoding of the data.

In quantitative research investigation, the questionnaire (list of open and closed questions), was applied individually by doctors and residents. To limit the subjectivity of operators in choosing subjects we used quota sampling (sampling procedure non-randomized), we framed the classification of these elections in certain "quota": age, origin, so the final sample to have a similar distribution percentage and the factors that we want to determine to not be influenced by modifiable factors such as age and gender.

The criteria for the selection were: to be from Arad County, aged between 41 and 80 years and to have signed an informed consent. Exclusion criteria of people in the study were: age under 40 years or over 81 years (because many pathologies and high degree of physical and mental deterioration can influence the study), patients with mental retardation or diagnosed with dementia, people's refusal to join the study.

Data were statistically analyzed using the programs SPSS 14.0, Epi Info 7 and Microsoft Excel 2007.

RESULTS AND DISCUSSIONS

Some authors consider that aging begins at age 20, when cells begin to have negative effects on humans. Therefore, there is a loss of cells in certain organs and especially in the brain. However, the visible effects of aging are not visible yet. Between 45 and 65 years old, the first physical and psychic transformations appear. In women, the menopause marks the end of the fertile period. After menopause, there's a decrease of estrogen and progesterone levels. Decreased estrogen levels can lead to changes in both physical appearance and health. During this period, some women suffer from insomnia, migraines, breast size reduction and loss of skin elasticity.

On the other hand, the essential moment of puberty in girls is the occurrence of menarche which indicates the maturation of ovarian follicles, besides the appearance of secondary characters. The menarche occurs between 11 and 14 years old, according to the scientific literature, but in recent years due to lifestyle and diet, it dropped a lot, lowering the age at which some "women" have their first child (a child with their own child) with it. In this particular study, the average age of menarche occurrence is 13 years old.

	Obs	Total	Mean	Var	Std Dev	Min	25%	Median	75%	Max	Mode
Age of first menarche	335	4413	13.1731	3.8681	1.9668	10	12	14	14	17	14

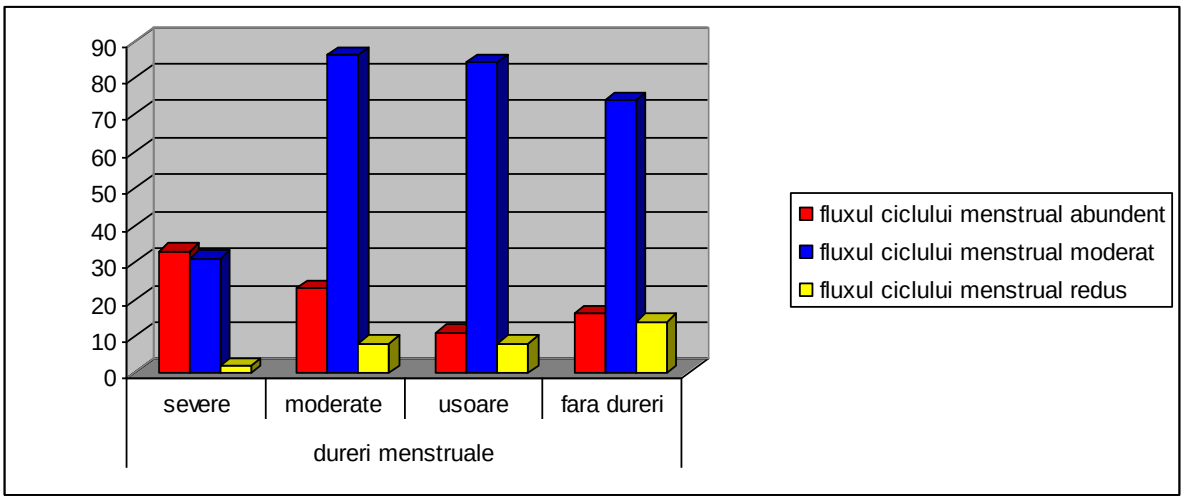
19.43% of the 400 surveyed females present irregular menstruation, 70% have a moderate menstrual flow, 22.37% produce an abundant menstrual flow and 16.6% of women experience severe pain associated with menstruation. All these can be the basis for endocrine problems.

Regularity of the menarche	**Frequency**	**Percent**	**Cum. Percent**	**95% CI Lower**	**95% CI Upper**
Regular	321	80.65%	80.65%	76.35%	84.35%
Irregular	79	19.34%	99.50%	15.19%	23.11%
TOTAL	400	100.00%	100.00%		
Menstrual Flow					
Abundant	89	22.37%	21.36%	17.50%	25.78%
Moderate	281	70.60%	91.96%	65.82%	74.98%

Reduced	30	7.04%	98.99%	4.81%	10.12%
TOTAL	400	100.00%	100.00%		
Menstrual pain					
Severe	66	16,6%	17.01%	13.48%	21.21%
Moderate	117	29,39%	47.16%	25.68%	35.03%
Mild/Light/Easy	101	25.37%	73.20%	21.79%	30.75%
No pain	116	28,64%	100.00%	22.52%	31.56%
TOTAL	400	100.00%	100.00%		

Distribution of women according to the regularity of menstruation, menstrual flow and menstrual pain

Comparing these, we see that in the category of patients with severe menstrual pain, the ones with an abundant flow of menstrual cycle exceed, compared to other groups (moderate pain, mild or no pain) in which the patients with a moderate flow menstrual cycle prevail. Using the chi-square test, $\chi 2$ (6) = 45.931, p <0.01, we can see that there are significant differences between the two variables.



The distribution of women based on their menstrual flow and pain

If we compare these symptoms out of the menstruation with the means of contraception they use, we can observe that most of the women with these symptoms use contraceptives which have a beneficial effect . The result of the test $\chi 2$ (40) =99,441, p<.01shows us there are significant differences between the 54 groups that we obtained.

	MEANS OF CONTRACEPTION									
Symptoms outside the menstruation	Contraceptives	Sterilet	Condom	Diaphragm	Others	Contraceptives and sterilet	Contraceptives and condoms	Sterilet and condoms	Contraceptives, sterilet,condoms	Total
Bleedings outside the menstruation	9	0	0	0	6	0	2	0	0	17
Breast pain	12	9	18	0	12	0	2	4	4	61
Irregular menstruation	13	0	4	4	6	0	8	0	0	35
Bleedings,breast pain	2	0	0	0	2	0	0	0	0	4
Breast pain , irregular menstruation	0	0	0	0	6	2	4	0	0	12

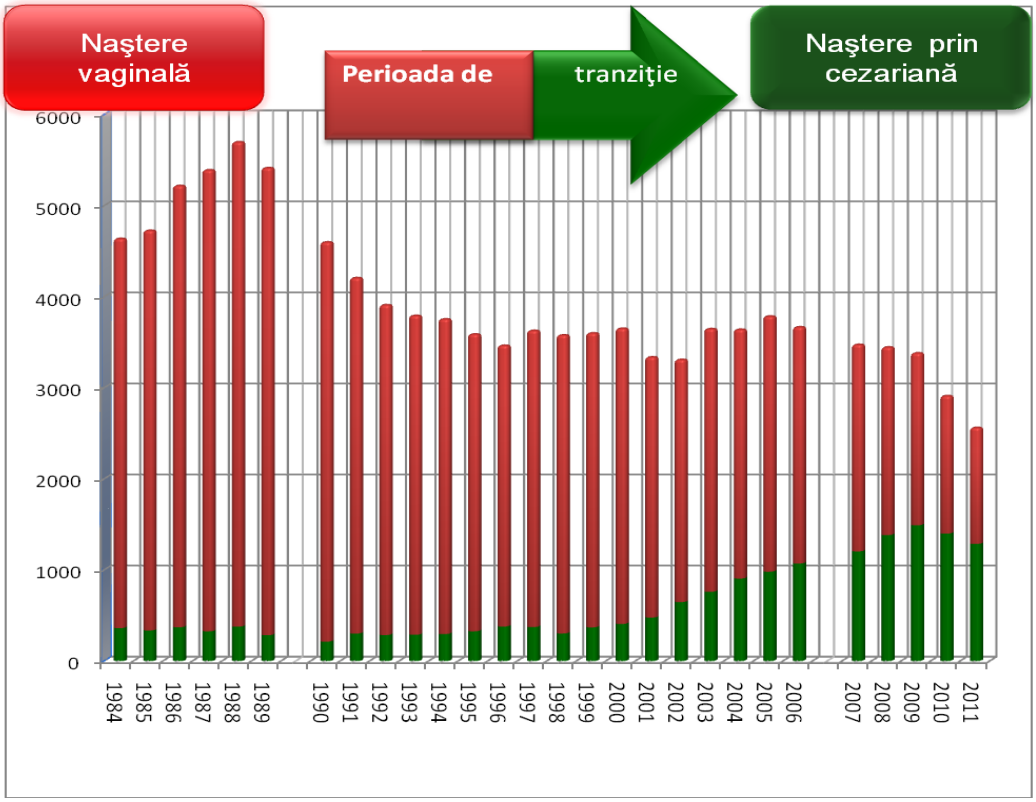
Bleedings,breast pain,irregular menstruation	5	0	0	0	4	0	2	0	0	11
Total	41	9	22	4	36	2	18	4	4	140

Distribution of women based on the presence of symptoms outside of menstruation and the type of contraception used

Out of the 400 women studied, 318 gave birth vaginally (79.5%) , 51 by caesarean section (12.75%) and 7.75% had no children (31 people). It is noted that the rate of caesarean delivery in the past was very low, compared to the index which now is approaching 60%.

According to the study "XXI century society influence on choosing how to give birth" conducted by Dr. Furău Cristian George and his collaborators between 1984-2011 where 110046 births were registered, of which 17214 by caesarean section. Global Index for caesarean is 15.64%. The average number of births / year is 3930.21 / year and the average number of caesarean sections are 614.78 / year. The number of births and the rate of caesarean section have not been kept constant throughout the range, which is why the study was conducted further on 3 periods of time based on medico-socio-economic changes in Romania: the period of forcing the birth regardless of the consequences (1984-1989), the transition period (1990-2006) and caesarean section liberalization period (2007-2011).

Dividing the 28-year interval studied in these three periods, it reveals a continuing decline in the birth rate (from 5182.50 / year at 3657.17 / year, to reach 3155.80 / year) and the exponential growth in both the number and caesarean index (313 / year - 6.62% in the first period 496.11 / year - 13.50% in the second and 1353.2 / year - 43.43% last). Decreased birth is significant (44.75%), and caesarean index grew 6.56 times.



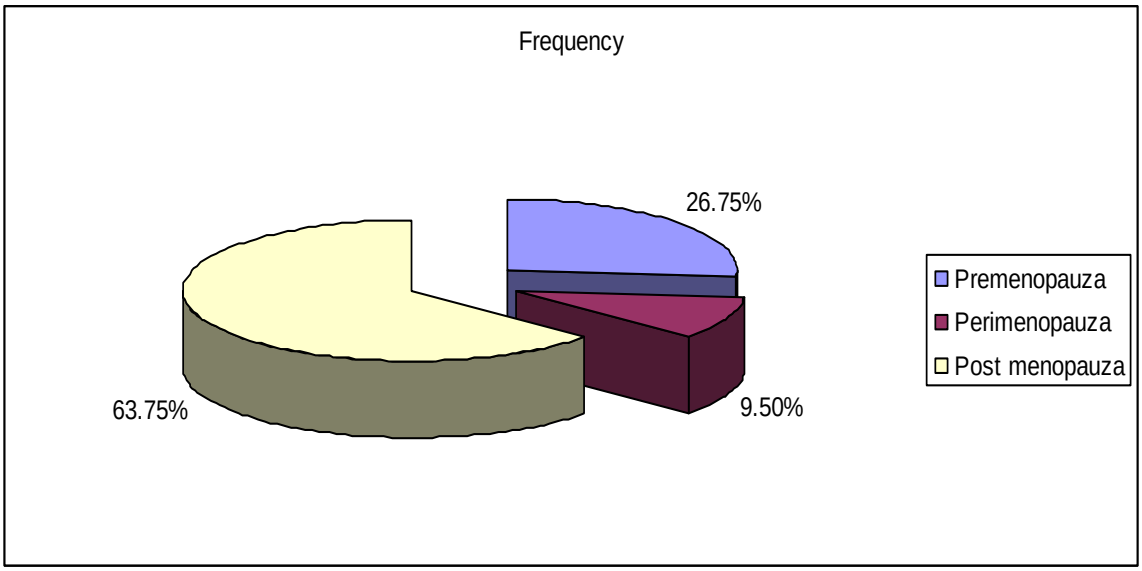
Number of births naturally and by caesarean section during 1984-2011

Regarding abortion, with legalization, after the revolution of 1989, the number is greatly increased. In our study, 100 people had miscarriages and 115 abortions were performed on request. We note with concern that there are people who even performed 10 abortions on demand. Thus, we believe that abortion was used as a means of contraception in the past.

Third age complex pathology in women is generally known as postmenopausal pathology, but traditionally explained by the cessation of ovarian function (menopause) and, as noted, an important step in women's lives. Physiological changes associated with the cessation of ovarian function and the pathological changes that become apparent after don't have a sudden installment; Thus, describes a transition period (perimenopause), which is especially important by the fact that during this period, the treatment for "aging" pathology is most effective in women and may take the form of prevention (primary and secondary). Menopause coincides temporally with the increased incidence of cardiovascular diseases, osteoporosis, mental and emotional disorders, cognitive and longtime has been considered the primary reason for all these morbid changes.

Menopause is seen as the cessation of ovarian function around the age of 50, and being normal and physiological, so menopausal women should not be regarded as suffering from a disease of hormonal insufficiencies.

In the study, regarding the current state of the menstrual cycle, 107 people are premenopausal with regular cycles (26.75%), 39 women in perimenopausal period, called the transition, with irregular cycles, but which have not been 12 months without a menstrual cycle (9.5%) and the remaining 254 are postmenopausal women, representing a rate of 63.75%.



The table below indicates the average age of menopause depending on the menstrual flow.

	N	Mean	Std. Deviation	Std. Error	95% Confidence Interval for Mean		Minimum	Maximum
					Lower Bound	Upper Bound		
abundant	67	47,22	6,407	,783	45,66	48,79	30	58
moderate	171	47,96	6,317	,483	47,01	48,92	25	59
reduced	16	51,25	3,679	,920	49,29	53,21	45	56
Total	254	47,98	6,257	,393	47,20	48,75	25	59

Distribution of patients according to the average age of menopause and menstrual flow from history of these people.

Cervical cancer is the second most common type of neoplasia in women, while the first place is occupied by breast carcinoma. 500,000 new cases are recorded annually and the number of deaths due to cervical cancer are over 270,000 per year (Ferlay et al, 2004; Parkin 2006).

Cervical carcinoma is a malignant epithelial neoplasm derived from epithelial lining of the cervix wraps, especially at the squamous cylindrical junction, which is a 'sensitive' point of transit between exocervix and endocervix. Histologically, in most cases it is an epidermis carcinoma and only in few cases we are dealing with an adenocarcinoma.

HPV is the acronym used to denote the Human Papilloma Virus, which is considered as the main risk factor for the lesions of anogenital carcinoma but at the same time is considered as the possible cause of various cancers, which can develop in the aero-digestive track.

About 40 types of HPV infect the mucosal epithelium and are classified according to epidemiological relationship between them and cervical carcinoma; of which about 15 are considered an oncogenic risk.

High Risk (types associated with the development of malignant lesions, and tumor preinvasive)	**16, 18**, 31, 33, 35, 39, 45, 51, 52, 56, 58, 59, 68, 69, 73, 82
Possibility of High Risk (possible role in tumor formation and pre-neoplastic lesions)	26, 53, 66
Low Risk (HP viruses associated with benign lesions development and very rare in neoplastic forms)	6, 11, 40, 42, 43, 44, 54, 61, 70, 72, 81

Oncogenic potential of different types of HPV, genital (by: Munoz and others, 2003)

In the last half century mortality rates of cervical cancer has dropped significantly in the United States of America. A physician-scientist named George N. Pap created the Pap test in 1940. This test is considered as one of the main factors that contributed to reducing the number of deaths from cervical cancer.

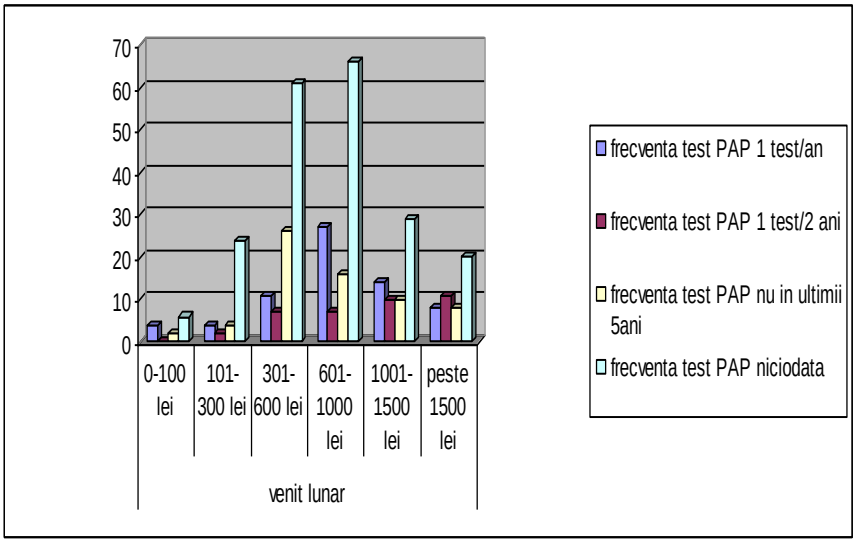
Activities of screening for cervical cancer is done through the National Program for early, active detection of oncologic diseases, as multiannual sub-program funded by the Ministry of Health and implemented in collaboration

with the National Health Insurance and healthcare providers, public or private, accredited to participate in the screening program.

In the study made in Arad, 193 patients from a total of 400 tests were performed PAP test, which is a percentage of only 48.25%.

We can see that although a national screening is free of charge, depends on the income of the persons and their studies.

The statistical data shows that the distribution of those who have not done a Pap test ever and those who do their Pap test 1 time per year is balanced in the 6 categories of income, even if the income of 600 lei ratio of those who do one PAP test once a year and those who have never done PAP test is higher than the income groups below 600 lei. Frequency at those who take the test every two years increases with income. It also notes that income bracket 301-600 lei have the highest frequency of those who did not mate the PAP test in the last 5 years.

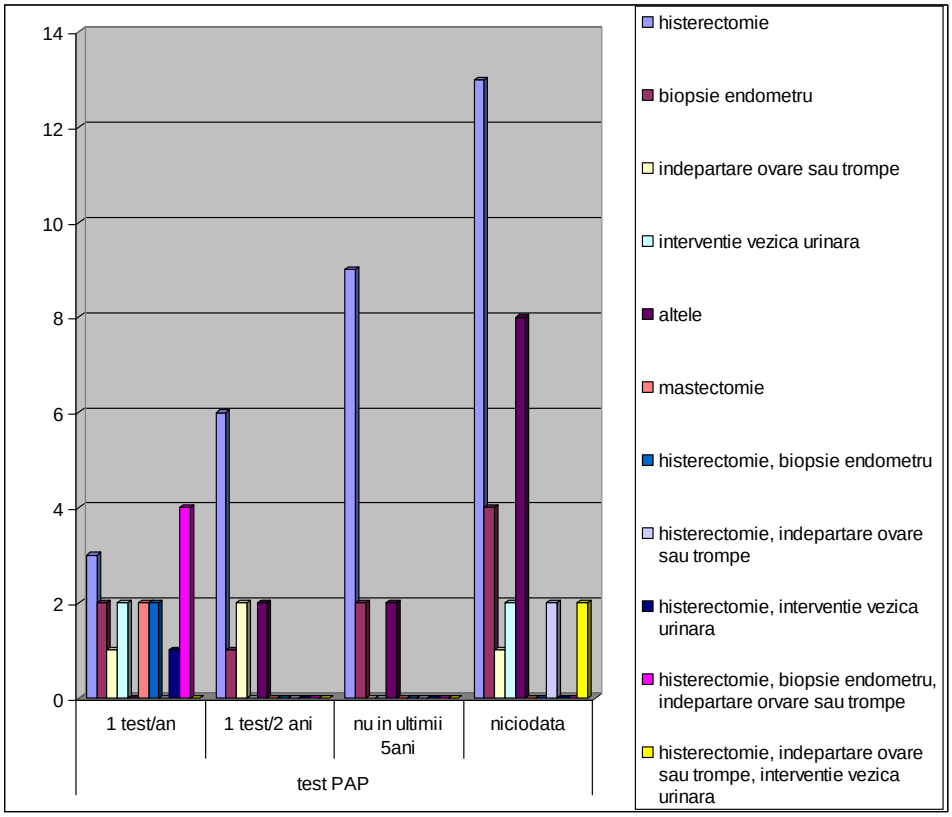


Distribution of women according to frequency of PAP testing and monthly income

		Frequency of PAP test				Total
		1 test/year	1 test/2 years	not in the last 5 years	never	
Monthly income	0-100 lei	4	0	2	7	13
	101-300 lei	4	2	4	24	34
	301-600 lei	11	7	26	61	105
	601-1000 lei	27	7	16	66	116
	1001-1500 lei	14	10	10	29	63
	over 1500 lei	18	23	8	20	69
Total		78	49	66	207	400
		p<0.01				

Distribution of women according to frequency of PAP testing and monthly income

If we layer the women with and without gynecologic surgery depending on the frequency of PAP testing, we note that a large percentage of 16.36% of patients who did not test PAP in recent years, and never underwent gynecological surgery. In this category we include hysterectomy, endometrial biopsy, removal of annexes and interventions on the bladder. The vast majority of patients underwent hysterectomy (22 patients - 48.88% of patients operated) and other intervention associated with hysterectomy (11 patients- 24.44%). The test result $\chi 2$ (3) = 8.305, $p < 0.05$, shows that there are significant differences between the 8 groups obtained.



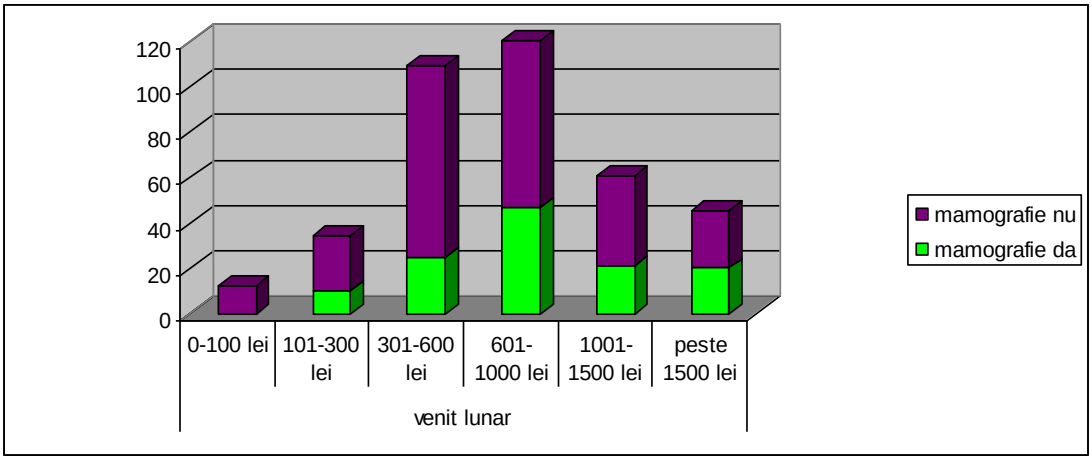
Distribution of women by type of gynecologic intervention suffered and frequency of PAP testing

According to the specialty literature, breast cancer is the most common cancer and the second leading cause of cancer death in women. Because of such high incidence but also the aesthetic and symbolic value of the breast, this disease has always been a major stress factor for women. The rate of overall survival at 5 years is 60% but exceeds at 80% when the disease is detected in the early stadium, which is the reason why the introduction of an organized mammography screening program should be one of the highest priorities within the national health promotion.

By age groups, breast cancer incidence increases approximately linearly between 30-55 years old, being unusual in younger age groups. At 50-54 years old age group, the incidence is 10 times higher than the age group 30-34 years old. The highest incidence can be seen in 75-79 years old age group, and 70-74 years old.

In our study, there were only two people that have been identified with breast cancer and treated with mastectomy and chemotherapy.

Data shows that in groups with an income of over 600 lei, the number of patients carrying out their mammograms is higher than those who do not, compared to income groups below 600 lei. In the group with an income below 100 lei there were not registered patients who did a mammography.



Distribution of women according to income and mammogram

The data shows that on each of the six categories of study, the number of patients who did not have mammography is higher than that of patients who did mammography. However, among patients with higher education there is a higher proportion of those who did a mammography than among those with other types of studies.

Urinary incontinence is a frequent disease whose incidence increases with age. The prevalence of the symptoms in many studies that have been carried out, varies. Between 10-20% of adult age women show this this symptom once or several times per month. The prevalence increases with age: between 25-50% in women who have reached 75 years of age show involuntary leaks of urine. Urinary incontinence as an isolated symptom without being associated with a disorder that causes involuntary urine loss is rare. There are several types of urinary incontinence: effort urinary incontinence, detrusor hyperactivity, urinary retention with overflow incontinence, fistula, and congenital anomalies.

Effort urinary incontinence is the most common occurrence involved in involuntary urine loss during exercise in adult women. It has 3 degrees: first degree - IUE in great physical effort: sneezing, lifting heavy weights; Tier II - IUE moderate physical effort: walking, climbing stairs; Grade III - IUE occurs in low physical effort - changing position. Predisposing factors of this condition are: vaginal birth, genital prolapse, menopause, collagen diseases, and obesity.

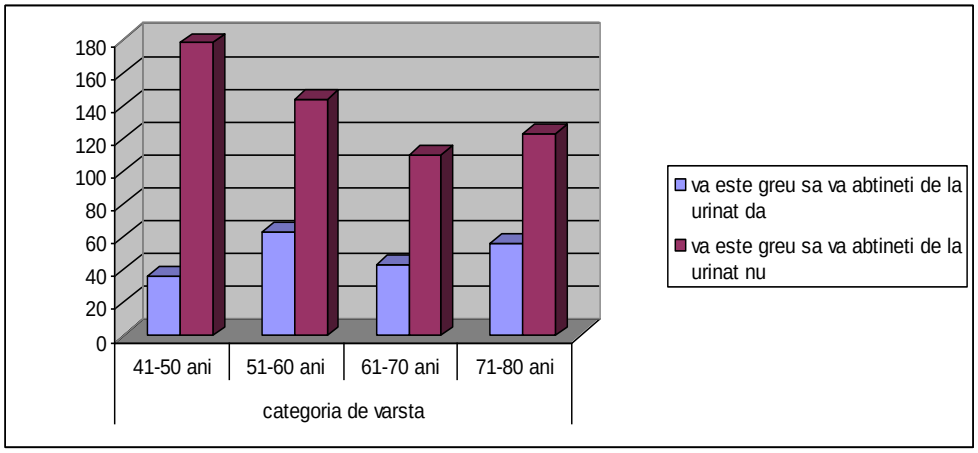
Vaginal birth can cause shy nerve lesions and by default lesions of the tissues supporting the distal urethra and urethral sphincter.

Genital prolapse is not a direct cause of effort urinary incontinence, but the same conditions that lead to his appearance can cause effort urinary incontinence (deficiency tissues supporting the pelvic floor). Previous Colpoces is a factor that favors the appearance of IUE.

Menopausal estrogen deficiency causes vaginal atrophy and a decrease in supporting urethral tissues elasticity.

Collagen is the main component of pubic-urethral ligaments, therefore collagen diseases lead directly to IUE.

Obesity increases intra-abdominal pressure that can be considered a predisposing factor of IUE.



Distribution of women by age and urinary incontinence

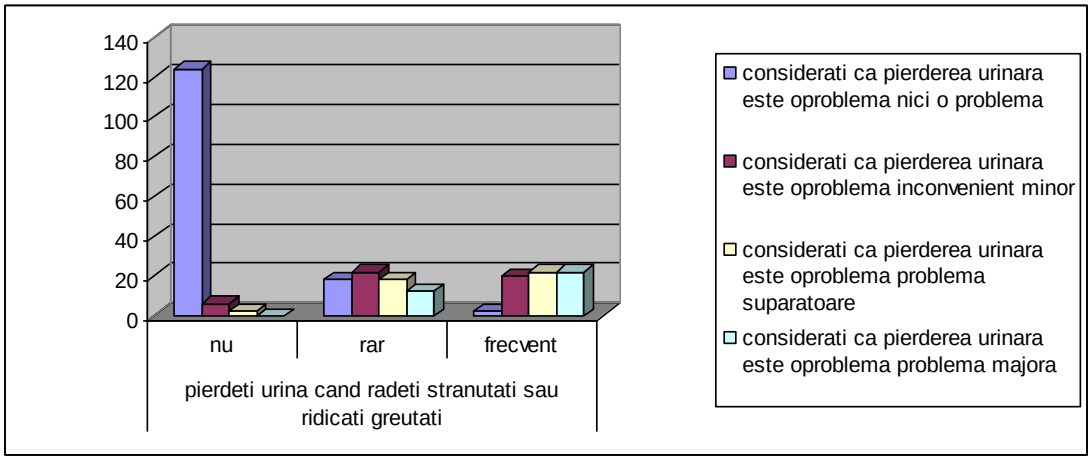
In this study, we notice a fairly high incidence of urinary incontinence effort in the group of female population of 49.5%. From the graphic, we can see that the incidence increases with age. After the age of 50, the incidence is doubled from 16% at people aged 41-50 years, to approximately 30% for those over 50 years. The test result $\chi 2$ (3) = 14.297, p <0.003, shows that there are significant differences between the 8 groups obtained.

If we group the incidence of IUE, depending on the number of vaginal births, we see that the incidence of urinary incontinence is dependent on naturally births. We see thus that a urinary loss, both rare and common ones occur at an average of over 2 natural births. Anova test result, F (2,302) = 6.013, p <0.01 indicates significant differences between the two variables compared.

Urinary loss	N	Mean	Std. Deviation	Std. Error	95% Confidence Interval for Mean		Minimum	Maximum
					Lower Bound	Upper Bound		
No	183	1,81	1,068	,079	1,66	1,97	0	7
Rarely	92	2,32	1,547	,161	1,99	2,64	1	7
Frequent	30	2,37	1,450	,265	1,83	2,91	1	5
Total	305	2,02	1,290	,074	1,87	2,17	0	7
p = 0,03								

Distribution of women from the loss of urinary and vaginal baby delivery (Anova)

Inspecting the chart below we can see that those who don't have urinary problems consider mainly that occasional urinary loss are not a problem while patients that experience urinary loss rarely or frequently consider that urinary loss is a minor inconvenience or major, and a pretty significant amount of people see this pathology as a major health problem. The test result $\chi 2$ (6) = 49.181, p <0.01, shows that there are significant differences between these variables.



Distribution of women according to urinary loss

CONCLUSION

The problems of old age and aging is and will be a generous field of study, and on current demographic conditions, even a first order requirement. Knowing all facets of old age, the joys and benefits, but also its pains and vulnerabilities, as well as knowing the real needs, but also those experienced by older people is a fundamental requirement of the policies based on the life quality. Also, knowledge on living conditions, lifestyle and possibilities of meeting the vital needs is an essential need for society as a whole, as long as aging is a natural phase of life, which no one can avoid.

In a society trapped in an accelerated aging process, quality of life means getting more quality of life of those in the third period of life. It is necessary to undertake social action by all decisional agents and society in general, to ensure healthy aging, to quality life with the lowest social cost.

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