

## STUDY OF THE USE OF COMBINED ORAL CONTRACEPTIVE MEDICINES

Cuc Hepcal Ioana \*, Dehelean Cristina Adriana \*\*, Morgovan Claudiu \*, Olah Neli-Kinga \*,  
Orodan Maria \*, Toth Csongor \*, Osser Gyongyi \*, Motoc Andrei \*\*\*, Pallag Annamaria \*\*\*\*

\*"Vasile Goldis" Western University of Arad, Faculty Pharmacy 91-93, L. Rebreanu Street,  
Arad, Romania, e-mail: [gyongyiosser@ymail.com](mailto:gyongyiosser@ymail.com)

\*\*University Medicine and Pharmacy "Victor Babes" Timișoara, Faculty  
Medicine, Specialization  
Pharmacy P-ta M.Eftimieno.2 Timisoara

\*\*\*University Medicine and Pharmacy "Victor Babes" Timișoara, Faculty  
Medicine, Specialization  
Medicine, P-ta M.Eftimieno.2 Timisoara

\*\*\*\*University of Oradea, Faculty of Medicine and Pharmacy, Pharmacy Department, P-ta  
1 Decembrie, no. 10, Oradea, 410223, Romania

### **Abstract**

*Contraceptive methods using contraception medication are medicinal products based on hormones such as the so called pill contraceptive, injections with hormonal contraceptive, patches (patch) fixing hormonal contraceptive on the skin and vaginal rings. Contraception using hormonal methods has very good results, prevents pregnancy by stopping monthly production of ova (female sex cells) and can also attenuate the unpleasant manifestations events that occur during menstruation (abdominal pain, cramping, etc.).*

**Key words:** medication, birth control pills, hormonal side effects, hypertension

### **INTRODUCTION**

First approval of contraceptives in the US was in 1960 and was considered a very popular method of contraception. It is currently used by over 100 million women worldwide and approximately 12 million in the US.

In present there is a wide range of contraceptive methods from which the most convenient and widely used oral contraceptives. To obtain performance in medication birth control in pharmaceutical and the condition is a partnership between pharmacist-medical specialist and patient (Ratiu PM et al 2011, Speroff & Darney, 2011, Guillenbaud, 2004, Bennet & Pill, 2009, Winter, 1970).

Steroid hormones released from the ovaries (estradiol and progesterone) are released into the bloodstream, reaching breasts, fallopian

tubes, uterus, vagina and vulva. Some of these hormones reach from the hypothalamus and pituitary on which exerts an effect of feedback stimulus, especially inhibition, depending on their concentration in the blood. (Apahideanu O., 2001, Brian, 1999, Elliman, 2000).

Oral contraception is based on the use of hormone preparations called estroprogestative synthesis.

The occurrence of high blood pressure is by increasing the average values by 5-7 mmHg in women with other associated diseases such as dyslipidemia, diabetes, obesity. The severity of coronary artery disease appreciated by using SYNTAX score was higher in women compared to females who have extra medication contraceptives (Osser et al, 2012, Milos & Zosin, 2007, Pincus et al, 1958).

Pharmacodynamics interactions occur when a medicine directly influence clinical actions of another medicament synergism or antagonism by. (Meyer & Rodvold., 1996, Huezo & Carignan, 1999, Conea, 2014).

#### **MATERIAL AND METHOD**

The group studied was made up of 172 women aged between 18 and 45 years constituted on a voluntary basis sample. The women were asked to complete a questionnaire by pharmacies and an interview guide without his identity being discovered.

The target group was divided into three age groups: 18-20 years, 20-30 years and 30-45 years, in order to compare certain aspects related to the use of contraceptives and the use of other treatments depending on the diseases held previously.

Interview questionnaire contain aspects related to previous history of chronic diseases, consumption of medications, allergies, use of birth control pills after advice from medical specialist or as self-medication, etc.

#### **RESULTS AND DISCUSSIONS**

Results obtained from the questionnaire interview on a sample of 172 women are presented in what follows.

In the Table 1 we presents the structure of the sample took account of a certain number, average age and standard deviation for each age group,

Table 1.

Significance of differences by age group averages

No. group	Age group	Averages	Deviated standard
1	Women aged between 18-20 years	17,35	4,15
2	women aged between 20-30 years	31,24	6,70
3	women aged between 30-45 years	51,41	9,09

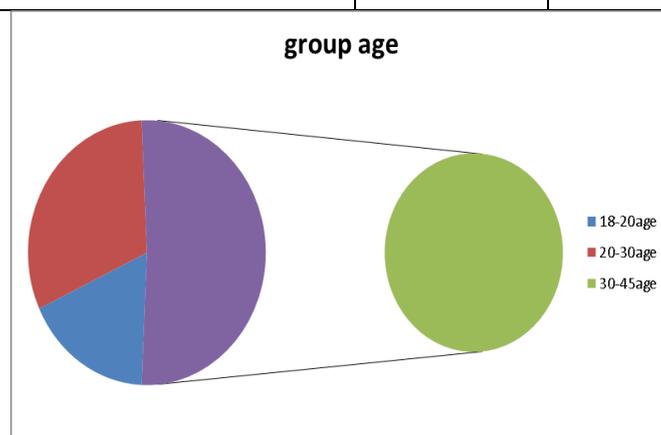


Fig. 1 Significance of differences by age group averages

Women from age group no.1 of 18-20 years experiencing at a percentage of 22.5% resulting from the use of birth control having the following side effects: CNS disorders (migraine, decreased libido, etc.), gastrointestinal disorders, reactions hypersensitivity.

Women from age group no.2 of 20-30 years, were highlighted in a 29% having the following side effects: CNS disorders, thromboembolism, gastrointestinal disorders, hepatic disorders.

Women from age group no.3 of 30-45 years, reveals at a percentage of 38.5% having the following side effects: thromboembolism, hypertension, gastrointestinal disorders, cardiovascular disease, hepatic problems.

Advancing age increase the number of days of using the birth control side effects that occur are multiplied. To limit the adverse reactions that may occur due to the use of birth control, their use requires that should take place as a result of clinical investigations / laboratory and specialist recommendation. One of the side effects was detected by the appearance of hypertension is increasing on average by 5-7 mmHg values in women with other associated diseases such as dyslipidemia, diabetes, obesity. The severity of coronary artery disease evaluated using SYNTAX score was

higher in female patients compared to females who have extra medication contraceptives (Osser et al, 2012, Wilkinson & Szarewski, 2003, Conea, 2014).

Table 2.

Significance of differences by age group averages based on associated diseases

No. group	Age group	Average	Standard Deviation
1	Women aged between 18-20 years	22,5	9,9
2	women aged between 20-30 years	29	5,10
3	women aged between 30-45 years	48,5	11,10

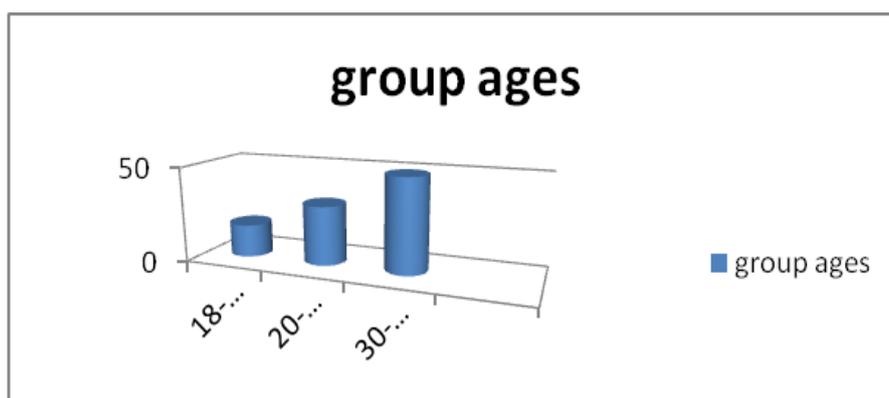


Fig.2 Significance of differences by age group averages based on associated diseases

Regarding long-term use of oral contraceptives may be accompanied by the appearance of various problems, but this only happens in a number of cases, especially when taking birth control was not correlated with medical advice gynecologist and practitioner, with the appearance of diseases over time, or other situations that shall require the surrender birth control or other methods of contraception choice less invasive to the body.

## CONCLUSIONS

These misconceptions can be avoided only by initiating programs to correctly inform people on the benefits and risks of using oral contraceptives; correct information is usually followed by their correct use.

Many women pay the price of their ignorance, by using contraceptive pills without the doctor's recommendation and only based on their friends' recommendations or after consulting the internet. These are the reasons why multiple discomfort manifestations of the body emerge in these cases which, over time, generate false beliefs such as the one claiming that contraceptive pills favour weight gain, lead to infertility, cause malformations to future foetuses, cause cardiac diseases etc.

#### ACKNOWLEDGEMENTS

This paper was published with partly support of the research projet "Studiu privind influența administrării contraceptivelor în mediul rural", Regional Center for Public Health no.1 / 02.02.2015 Arges Romania

#### REFERENCES

1. Apahideanu O., 2001, Planificarea familială, Ed.Signum, Reșița 45-124 pp.
2. Bennet J., Pope A., 2009, *The Pill- Are you sure it is for you?*, Ed. Orion Books, 156-198 pp.
3. Brian P., 1999, *The third generation oral contraceptives*, Ed BMJ, 34-112 pp.
4. Elliman A., 2000, *Interactions with hormonal contraception*, J Fam Plann Reprod Health Care, vol 26(13): 109-111 pp.
5. Fischbach F., 2009, *Chemistry Studies in a manual of laboratory and diagnostic tests*, Ed Lippincott Williams & Wilkins, USA, 49-73 pp.
6. Goldzieher JW., 1982, *Estrogens in oral contraceptives: historical perspective*, Johns Hoopkins Med J, 150(5): 165-169 pp.
7. Guillenbaud J., 2004, *Contraception*, Fifth Edition, Editura Churchill Livingston Elsevier, 56-154 pp.
8. Huezo C., Carignan C., 1999, Ghidul serviciilor de planificare familiala, Regia autonomă Monitorul oficial, București, 1999;
9. Speroff L., Darney P., 2011A *Clinical Guide For Contraception*, Ed Lipincott Williams and Wilkins, 145-223 pp.
10. Meyer JM., Rodvold KA., 1996, *Drug biotransformation by the cytochrome P-450 enzyme system*, Editura Infect Med, 45-78 pp.
11. Miloș A., Zosin I., 2007, Noțiuni de endocrinologie clinice pentru studenții facultății de farmacie, Editura Lito UMF, Timișoara, 27-68 pp.
12. Osser G, Orodan M., Morgovan C., Atyim P., Toadere A., Popescu M.I., 2012, The study means of locating a narrowing arterial aneurysm in preventing myocardial infarction, *Studia Universitatis - Seria Stiintele Vietii Arad*, vol 22(1): 55- 59 pp.
13. Pincus G., Rock J., Garcia C.R., Paniagua E., Rodgriquez M., 1958, Fertility control with oral medication, *Obstet Gynecol*, vol 2: 46-50 pp.
14. Cuculici P, Gheorghiu A.W., 2012, Lippincott, *Farmacologie ilustrată*, Editura Medicală Callisto, Ediția a 5-a, 49-77 pp.
15. John R., Garcia Celso R., 1957, Observed effects of 19-nor steroids on ovulation and menstruation, *Proceedings of a Symposium on 19-Nor Progestational Steroids*, Chicago, Searle Research Laboratories, 124-129 pp.
16. Conea S., 2014, *Farmacie clinică*, Editura Risoprint, 35-144 pp.
17. Tyler ET, Olson HJ., 1959, Fertility promoting and inhibiting effects of new steroid hormonal substances, *Ed Jama*, 17-88 pp.

18. \*\*\*United Nations, World Contraceptive Use, Department of Economic and Social Affairs/ Population Division, 2005.
19. Vulliet E; Cren-Olive C, Grenier-Loustalot M.F., 2011, Occurrence of pharmaceuticals and hormones in drinking water treated from surface waters, Environmental Chemistry Letters, vol 9: 103-114 pp.
20. Vaughan P., 1970, The Pill on Trial, Ed. New York: Coward-McCann, 112-167 pp.
21. Winter I.C., 1970, Summary in Proceedings of a Symposium on 19-Nor Progestational Steroids Chicago: Searle Research Laboratories, 37-42 pp.
22. Winter I.C., 1970, Industrial pressure and the population problem –the FDA and the pill, Jama, 136-179 pp.
23. Wilkinson C., Szarewski A., 2003, Contraceptive Dilemmas, Altman Publishing, 36-48 pp.
24. <http://www.anm.ro>,
25. [http://www.drugs.com/drug\\_interactions.html](http://www.drugs.com/drug_interactions.html),