Risk Factors of Cardiovascular Disease among the Oral Contraceptive Users in Kermanshah City of Iran

Madam, The third generation OCP is the new progesterone which lowers androgenic activity.[1]. However the OCP that is used by the Iranian women contains levonorgestrel with high androgenic activity.

To determine the risk factors of cardiovascular disease among the women who used OCP in Kermanshah city of Iran, women were recruited from 12 primary health care centers across the city. The study group comprised of 360 women using combined low dose oral contraceptive (30 microgram ethinyl estradiol and 150 microgram levonorgestrel) for six or more months.

The mean duration of OCP use was 3.7 ± 0.2 years. The mean age and BMI was 31.8 ± 8 years and 25.9 ± 4.1 respectively. There were 43.3% women over 35 years. There were not any smokers. The mean systolic and diastolic blood pressure was 126 ± 11 and 80 ± 8 mmHg. The prevalence of hypertension was 17.5%. In women over 35 years, the prevalence of hypertension was 27.33%. Hyperlipidemia and coronary artery disease was found in 4.2% and 5% caess respectively. Other biochemical parameters are presented in Table.

Table. The mean (standard error) of biochemical parameters in two groups.

	OCP users (n=360)
FBS (mg/dl)	94± 2.5
Cholesterol (mg/dl)	193± 1.6
Triglyceride (mg/dl)	187± 3.5
LDL (mg/dl)	117± 1.6
HDL (mg/dl)	39.3± 0.3

In our study the systolic and diastolic blood pressures were high. Graff and coworkers[2] reported similar results. The OCP used by Iranian women contains 50-microgram ethinyl estradiol and 150 microgram levonorgestrel. The high dosage of levonorgestrel in these pills has high androgenic activity.[3] This may explain why we did not observe the useful estrogen effects on lipid metabolism among the OCP users in our study.

Another main finding was high proportion of women over 35 years old among the OCP users who were hyperlipidaemic and/or hypertensive.

The use of new generation OCP with fewer side effects is recommended. Necessary attention should be paid to the cardiovascular risk factors especially hypertension and history of coronary artery disease, by the obstetrician before prescribing OCPs.

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References

1. Foulon T, Payen N, Laporte F, Bijaoui S, Dupont G, Roland F, et al. Effects of two low-dose oral contraceptives containing ethinyle estradiol and either desogestrel or levonorgestrel on serum lipids and lipoproteins with particular regard to LDL size. Contraception 2001;64:11-16.
2. Graff Iversen S, Tverdal A, Stensvold I. Cardiovascular risk factors in Norwegian women using oral contraceptives. Contraception 1996; 53: 337-44.
3. Crook D, Godsland IF. Safety evaluation of modern oral contraceptives. Contraception 1998; 57:189-201.