INTRODUCTION

Combined oral contraceptive pills are known to exert widespread metabolic effects. These metabolic changes have been reduced in magnitude, but not completely eliminated by use of the newer low dose oral contraceptive pill **(Cullberg et al., 1982)**. Cardiovascular disease (CVD) is one of the most serious side effects of oral contraceptive use and these formulation have been considered a risk factor for CVD **(Beck, 1981)**.

The evidence linking changes in lipid metabolism to CVD is very strong and oral contraception are known to affect lipid metabolism **(Brooks, 1984)**.

To reduce cardiovascular risk, a large-scale move toward preparations containing low dose of estrogens was initiated in the early 1970s, followed a few years later by efforts to minimize the dose of progestogens **(Piper and Kennedy, 1987)**.

The estrogen component was blamed for these effects of metabolic disturbance, and consequently the dose of estrogen was reduced **(Zadar and Nilsson, 1977)**. However during the last years, it has been evident, that also the progestogen component may influence blood pressure and may be the cause of disturbance of lipid metabolism **(Cullberg et al., 1979 and Larsson-Cohn et al., 1979)**.

As a result more attention was paid to the progestogenic part of the pill, and a preparation with reduced progestogen dose associated with a minor increase of the estrogen component was marketed **(Lachnit-Fixon, 1979)**.However not only dose

but also the type of progestogen plays a role **(Cullberg et al., 1979)**.

A prospective, comparative, randomized study of each new oral contraceptive is difficult to realize because of obvious ethical and practical reasons. Moreover the surveys designed to address this issue, have often been conducted on small samples and have led to contradictory conclusions **(Van der Vange et al., 1987)**.

The use of effective means of contraception has found a continuous worldwide increase. Hormonal contraceptives are the most effective method of birth control available, and is currently estimated that 100 million women are taking the combined oral contraceptive pill **(Tacchi, 1990)**.

It is well recognized that the best choice of OCs should have the lowest dosage of estrogen and progesterone, with greatest contraceptive efficacy, safety and highest acceptability and least side effects. The side effects of OCs pills must be observed and reported every now and then as the situation is a dynamic process, rather than being static **(Li-Ju Weng et al., 1991)**.

OCs were introduced in Egypt in 1961 after their acceptance as an efficient method of contraception.It is estimated that pill use among married women in Egypt is about 17% **(Hatcher et al., 1989)**.

In Egypt the official population estimate of 1986 is 50.303 million. About 70.23 million increase are expected by the year 2000, and it unlikely that food production will

continue to increase without substantial increase in investment **(Results of Population Censuss in Egypt AP; 1987).**

The first generation progestogens were developed in the late 1950s and with the exception of norethisterone and the structurally related lynestrenol, these disappeared when the second generation progestogen, levonorgestrel,was introduced. This progestogen could be used in pills in a quantity of micrograms instead of milligrams. The third generation progestogens came into use in the 1980s. The first member of this generation **(Marvelon)**,has been introduced in 1981 by organon, based on the progestogen, desogestrel.The second was **(Cilest)** introduced in 1986 by Ortho-Cilag and based on norgestimate. The third was **(Femovan)**, introduced in 1987 by Schering and based on gestodene. The fourth member was **(Gynera-Schering)** and based also on gestodene 75 micrograms and 30 micrograms ethinyloestradiol.

Gestodene,is a new synthetic progesterone from the gonane class.It has a favorably strong anti-oestrogenic effect which counteracts the undesired metabolic effect of EE on liver,and aldosterone antagonistic activity.It does not require hepatic transformation into active metabolites **(Hopp et al., 1986).**

The estrogen tend to have desirable effects on lipids by increasing high density lipoproteins (HDL-c) and decreasing LDL-c. Progestogens have just the opposite effects on HDL-c and LDL-c,so recent changes in pill formulations have involved efforts to lower the progestogens in pills given to women while not increasing spotting and break through bleeding **(Hatcher et al., 1988).**