

STUDY OF CYTOGENETIC EFFECTS OF MEDROXY
PROGESTERONE ACETATE (DEPO-PROVERA)
ON HUMAN LYMPHOCYTES IN CULTURE

THESIS

Submitted In Partial Fullfilment For the Degree of

M. Sc.

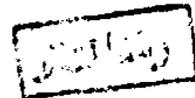
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بِسْمِ اللَّهِ الرَّحْمَنِ الرَّحِيمِ

بِإِذْنِ اللَّهِ الرَّحْمَنِ الرَّحِيمِ
وَمَا يَسْتَعْجِلُ الْوَعْدَ لَكُمْ مِنْ عِنْدِ اللَّهِ فَاصْبِرُوا
وَأَسْأَلُكُمْ فِي اللَّهِ لَعَلَّكُمْ تَتَّقُونَ

الآية ٢٠ من سورة قنقن.



*To My Parents
My Beloved Wife
and My Children*

For their love and support

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*INTRODUCTION,
AND
AIM OF THE WORK*

INTRODUCTION

The growth in the population is the most difficult problem that ever faced the human race.

As the population has been growing at very high rate, so all effort should be made to solve this problem. Thus the use of contraception is a necessity at the present time to face this tremendous imbalance between the economical state and the number of population.

It is widely acknowledged by health and family planning doctors that there is no single contraceptive that is ideal for all individuals at all stages of their sexually active and reproductive life. The instability of any particular method will depend on complex relationship of a wide range of variables, for example social acceptability of the method, its availability, the individual's health reproductive history, its cost, and above all its side effects.

There are different methods of birth control among them injectable hormonal contraceptive are used as depo-provera.

As current evidence suggests that the use of the

progestogen interferes less with lactation than does the pill (Karim et al, 1971), this would be a major advantage in the developing world like us, where successful and prolonged breast feeding is of critical importance.

The main difference between hormonal contraceptives and other drugs, is the long-term use of hormonal contraceptives.

Some of the adverse effects have already been recognized, some are at present merely suspected, and , perhaps the potentially most important ones still elude us.

In this last category are possible damaging effects on the genetic material.

In spite of the fact that contraceptive steroids have been the subject of more scientific publications than any other drug in history, their effects on chromosomes are scantily documented and controversial (Goh, 1968), (Badr et al, 1971), (McQuarrie et al, 1970), (Little field et al 1971, 1975), (Fitzgerald et al, 1973); (Gutierrez and Lisker 1973).

(Matton-Van Leuven et al 1974) long term exposure to very small levels of chemicals is suspected to participate in the development of malignancy or problems of a genetic nature.

Once a genetic alteration takes place in somatic cell, it is possible that this may be an initiating factor for the development of malignancy. If this genetic alteration hits a cell which will become a gamete, this may contribute to a teratogenic effect in the later generations (Kazantizis and Lilly 1979).

AIM OF THE WORK

1. The aim of this work is to detect the in vitro chromosomal changes that may result from exposure of human peripheral lymphocytes to medroxyprogesterone acetate (Depo-provera). This has its clinical relevance as MPA is used in many countries as the contraceptive of choice in national programs.

2. To find the relation between the different concentrations of this progesterone and the chromosomal aberrations if any.

REVIEW OF LITERATURE