EFFECT OF ADMINISTERING CLOMIPHENE CITRATE FROM DAY 3 INSTEAD OF DAY 5 OF MENSTRUAL CYCLE

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SUMMARY

The study is carried out to examine the difference in ovulatory and allied rates on administering clomiphene from day 3 instead of day 5 of the menstrual cycle. It was found that ovulatory rates and conception rates were significantly higher in the present study in the day 3 group. Also, carry home babies were more in this group however pregnancy wastage rates remain insignificantly different.

INTRODUCTION

Extensive use of clomiphene citrate (CC) in induction of ovulation is well known. Many different dosages and regimes of this drug have been used for the purpose (Macgregor et al 1968). However, since a long time CC was given from day 5 of menstrual cycle. This practice is continued by many gynecologists even today customarily. Inspite of this generally accepted approach, there is a lack of endocrine evidence supporting this treatment schedule. As per Rajan (1988) CC should be administered as early as possible after menstruation starts, perhaps on the second or third cycle day instead of the fifth day. In the present study, the difference if any in the results of this change from day 5 to day 3 has been examined.

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Accepted for Publication on 08.09.1993.

MATERIAL AND METHODS

The present study was carried out in the Dept. of Obstetrics & Gynecology, Medical College and SSG Hospital, Baroda. The study was in two parts. In the first part between 1984 to 1986 (for two years) patients who had received CC and whose follow up records were available were included. During this period we were administering CC from 5th day of the cycle for 5 days. In the second phase commencing from 1987 whence we switched over to administering CC from day 3 of the cycle for five days, equal number of patients were studied. The results of both these group of patients were compared.

Patients of both these groups were by and large similar as regards their presentation of anovulation which made the comparison more valid. Results obtained herein we compared by using the standard statistical methods to draw the conclusions therefrom.

RESULTS

Between 1984 to 1986 we had 37 subjects with complete follow up and records who were given CC for ovulation induction from day 5 of the menstrual cycle. An equal number (37) were than followed up from 1987 onwards to note the difference in results between the two if any.

As shown in table I, 89.19% subjects ovulated of which 51.51% subjects conceived when CC was administered from day 3 instead of day 5. The figures for the day 5 group being 72.97% and 40.74%. The difference between the two groups at df = 1 was statistically significant.

We accept the fact that the number of subjects not being too large, statistically the conclusions as regards the differences can be drawn only for this study.

One subject in the group where CC was administered from day 5 had an abortion whereas there was one abortion and one preterm labour in the other group. However on applying statistical analysis this difference was not significant.

However, on carry home baby rates the difference between both the groups was sig-

Table I

Ovulation - Conception rates

	CC from day 5 No.	%	CC from day 3 No.	%	
Ovulation	27/37	72.97%	33/37	89.19	Differences statistically significant.
Conception	11/27	40.74	17/33	51.51	

Table II

Preg. wastage - carry home baby rates

	CC from day 5 No.	%	CC from day 3 No.	%	
Preg. Wastage	1/37	9.09*	2/37	11.76*	* Statistically Not significant.
"Carry home baby" rates	10/37	27.03°	15/37	40.54°	°Difference statistically significant.

nificant. When they were administered CC from day 5, the carry home baby rate was 27.03% whereas the same rose to 40.54% when CC was administered from day 3. The difference was obvious and statistically significant.

DISCUSSION

In a normal ovulatory cycle the increase in FSH begins 1-2 days before menstruation. Starting of CC from day 5 is an attempt to time this drug as per the menstrual cycle and not the ovarian cycle (Wu - 1984). Though in a normal state the menstrual and the ovarian cycles coincide but the same may not be true in an induced cycle (Irianni - 1992). For these reasons it seems rational that if one intends to increase the FSH release by giving CC, ideally one should initiate the therapy before menstruation (Rajan - 1988). As this may have a practical difficulty if the patient is pregnant CC should rationally be started on second or third day of menstruation.

In fact, if CC is given on or after day 5 of the follicular phase, it may disrupt folliculogenesis, as the dominant follicle has already been selected by that day (Hodgen - 1982). Additional FSH if liberated at this stage will understandably lead to disruption of the dominant follicle and/or rescue subordinate follicles leading to multiple ovulation (Wu - 1984).

The clinical bearing of this endocrinal basis seems to be validated in this study. When CC was being started from day 5 the rates of ovulation and conception were around 70% & 40% respectively. The same rose to 89.19% & 51.51% respectively when we started administering CC from day 3. However in absolute number though the pregnancy wastage rates remain the same, as more women successfully ovulate with CC if started from day 3, the "carry home baby" rates in absolute numbers is more than the other group.

CONCLUSIONS

Commencement of administration of CC in anovulatory subjects from day 3 instead of day 5 leads to better ovulation and conception rates. The number of carry home babies was also more as a result of this, in the present study.

ACKNOWLEDGEMENTS

The authors are thankful to the Dean, Medical College, Baroda and the Superintendent, SSG Hospital, Baroda for permitting to carry out this study.

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