

EFFECTIVITY OF H. C. G. ADMINISTRATION IN CASES WITH HISTORY OF REPEATED SPONTANEOUS ABORTIONS : A PROSPECTIVE STUDY

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SUMMARY

62 subjects with history of repeated spontaneous abortions were prospectively studied over a period of eight years. They were administered HCG from the diagnosis of pregnancy till 14 weeks. 8.06% aborted inspite of HCG but 80.65% delivered full term live babies. This figure was evaluated from the 70% spontaneous resolution rate in any subject with history of such abortions irrespective of treatment. Thus, HCG administration may increase the resolution rate by about 11%. Incidence of PIH was distinctly more in these cases. Mode of delivery was similar to that of general population.

INTRODUCTION

Repeated spontaneous abortions can affect upto 1 percent of the population. (Coulam, 1986). However, there are more questions unanswered about its etiology and thus there are diverse modalities of treatment. Exogenous administration of HCG has been used by many workers for the treatment of this condition Harrison, 1988; Svigos, 1982). Encouraging results

have been reported by some of them.

In this prospective study we are presenting our results of the effectivity of HCG administration in cases with repeated spontaneous abortions.

MATERIAL & METHODS

This prospective study has been carried out in the Dept. of Obst. & Gynec., Medical College & S.S.G. Hospital, Baroda in its Unit III. It is a study of eight years, from January 1987 to December 1994.

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Those cases with history of repeated spontaneous abortions, two or more than two, were included after ruling out other known causes of these abortions. These included anatomical causes like cervical incompetence, autoimmune causes like antiphospholipid antibody syndrome, medical causes like uncontrolled diabetes and syphilis and the like. Genetic causes were not ruled out due to limitation of availability of relevant investigations, at the institution.

Thus, only those cases in whom none of the aforesaid causes of recurrent spontaneous abortions were present were included in this study. The dosage schedule of HCG administration was : 5000 I.U. intramuscularly every weekly till 14 wks. of pregnancy commencing as soon as the diagnosis of pregnancy was made. This was usually done by a urinary pregnancy test as soon as the subject missed her period.

These subjects were carefully followed up upto abortion or labour whichever occurred later. All relevant events in antenatal period were noted. Only those subjects who could be followed up till the culmination of the obstetric events were included in the study.

RESULTS

During these eight years of study there were 62 subjects who could be followed up completely after giving H.C.G.

As shown in this table 8.06% subjects aborted inspite of H.C.G. 4.38% had preterm live births and one case had a preterm still birth. 80.65% subject reached term and had a full term appropriate for date, live child.

The cause of preterm still birth was a congenitally malformed child with multiple malformations. She delivered at her mother's town away from the institution. Her details could be obtained from the discharge card given at the private hospital where she delivered. The subject who had a full term still birth was clinically and sonologically normal on previous visit. However, she was admitted with absent FHS and had a fresh still birth. There was no obvious congenital anomaly. Request for a post mortem was turned down by the relatives.

Interestingly, there was a distinctly high incidence of pregnancy induced hypertension in these subjects as shown in Table II.

18% of those subjects who had a full term appropriate for date delivery developed PIH.

Delivery outcome did not differ from that of the general population with 86% having a spontaneous normal delivery. 2 cases who had to be cesared out were those

Table I
Obstetric Outcome

	No.	%
Cases treated with HCG	62	
Spont. abortions	05	8.06
Preterm live births	03	4.83
Full term appropriate for date :	50	80.65
Full term small for -date	02	3.23
Full term still birth	01	1.61

Table II
Development of P. H. I.

	No.	%
PIH in those having FT-AFD delivery	09/50	18
Preterm live births - development of PIH	01/03	33.3
Full term small for date	01/02	50.0

of cephalo pelvic disproportion and 1 case who had a PIH developed fetal distress in 1st stage of labour. The subject requiring PGE gel induction developed imminent eclampsia and thus had to be induced, at term.

Amongst the 5 aborters, 4 were primary aborters and 1 was a secondary aborter. 4 abortuses were either dead or were diagnosed as missed abortion and were subsequently evacuated. There was one subject who had a live abortion.

Table III
Mode of Delivery in FT-AFD
(n = 50)

Mode	No.	%
Normal delivery	43	86
Caeserean Section	03	06
Forceps	02	04
Vacuum	01	02
Induction of labour with PGE ₂ gel.	01	02

DISCUSSION

Hasty conclusions from the fact that 80.65% subjects had a full term appropriate for date delivery can be perilious. This figure has to be evaluated from important facts: At any given instance of time, spontaneous resolutions occur in 70% of cases if recurrent abortions irrespective of any treatment modality. (Carp et al. 1990). Also, these were cases of "unexplained" repeated spontaneous abortions. Understandably, these are the cases where there is a maximum chance of such a spontaneous resolution. Thus, with a 70% chance of such a spontaneous resolution in actual terms, HCG can help 10% more subject.

In our unit we do not investigate cases of such recurrent loss for TORCH infections. We do have strong reason thereof. Carp et al (1990) strongly state that it is unclear whether these organisms ever cause abortions or merely infect an abortion which is already taking place. Also toxoplasmosis may cause sporadic abortion while in the acute stage, but probably not repeated abortion.

Exogenous administration of HCG has been administered by different dosage schedules (Harrison, 1988, Svigos, 1982). Strictly pharmacologically one of the lowest ones may not match with the half life of this drug. However, we strongly feel that it is not only the endorinal value of this agent which helps but also its immunological basis. It is possible that HCG preparations are contaminated by early pregnancy factor, antiidiotypic antibodies, growth factors or even it may be acting as an antigen. (Caro et al 1990). In the light of this vital information, pharmaco-

logical half life of the agent may not be very relevant in deciding the dosage schedule and thus one could successfully reduce the drug requirement as was done in the present study. Very early studies by Holund (1953) recommended schedules of 6000 I.U. daily for 5 days Vorster et al (1977) 3000 I.U. 3 times weekly upto 16 wks. and then individualised dose.

The extent to which the size and echo structure of corpus luteum of such pregnancies on U.S.G. will help us in deciding as to whether a particular case requires HCG to be given, it not yet well substantiated. However, subsequent studies may throw some light on the matter.

It was interesting to note that 4 of the 5 subjects who aborted had dead abortus or a missed abortion. These had indeed tested negative for antiphospholipid antibody syndrome and were therefore included in the study. To what extent did the alloimmune cause of abortion contributed in them is a matter of speculation.

Schweditsh M. et al (1979) demonstrated that serum chorionic gonadotropin (HCG) values are below normal or at the lowest limit of normal in five of the six subjects, who had blighted ovum in their

series. However, whether this was the cause or the effects of an abortion is still not very clear. If it is the cause then one can jump to a conclusion of explaining a temporal relationship between administration of HCG and the cure for spontaneous abortions. But we would not like to jump to such a hasty and simplistic conclusion which may even sound like a hubri.

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