HYPERGONADOTROPIC HYPOGONADISM A FRUSTRATING EXPERIENCE

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SUMMARY

A series of 21 cases of hypergonadotropic hypogonadism is being presented. Nearly 40% belonged to unknown cause group. 23.8% were a-follicular. Around 30% had clinical evidence of hypogonadism in the form of genital atrophy and all had amenorrhea. None of the 4 subjects of resistant ovarian syndrome treated at the institution nor any one from 4 others referred for donor oocyte programme have till date conceived making treatment of this condition in the form of conception, a frustrating experience.

INTRODUCTION

Hypergonadotropic hypogonadism is usually characterised by oligomenorrhea / amenorrhea, estrogen deficiency and elevated concentrations of FSH & LH. All this when present before 40 becomes a matter of concern and is termed loosely as premature ovarian failure. Its incidence is quoted to be anywhere between 10% to 28% in woman presenting with pathological amenorrhea for investigations (Mashchak, et al 1981; Kinch RAH et al - 1965).

It is with the objective of identifying different characteristics of these women and the chances of getting success in treating that this study has been carried out.

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MATERIAL AND METHODS

This study was carried out in the dept. of Obst. & Gynec., Medical College and SSG Hospital, Baroda for a period of eight years commencing from 1st Jan. '85. In all 21 subjects were identified to have hypergonadotropic state. All of these presented with amenorrhea and were subjected to investigations for hypergonadotropism on a set protocol.

Initially the patients were subjected to progestrone withdrawal test. If this was negative, they were subjected to estrogen plus progestrone withdrawal which if yielded a bleed the subject was subjected to hormonal assay. All hormonal assays were

carried out at a private hospital in the city as facilities for the same are not available at the institution.

The records of these women were thoroughly reviewed for evidence of auto immune disease, a history of symptoms of estrogen deficiency, a family history of premature ovarian failure and a history of any relevant ovarian disease or ovarian surgery.

When documented, these subjects were specifically examined for the physical evidence of estrogen deficiency (atrophic vaginal mucosa, scanty cervical mucus), the degree of sexual maturation, height and weight, any evidence suggestive of Turner's syndrome and the presence of any anomaly.

These were then classified in the different groups as identified by Caulam (1982) : viz.

- Resistant ovarian syndrome
- Autoimmune ovarian failure
- Afollicular ovarian failure or
- Idiopathic ovarian failure.

Afollicular ovarian failure was diagnosed on basis of laparoscopy and ultrasonography.

Three women were assigned the diagnosis of autoimmune disease as one each had juvenille diabetes, Crohn's disease and systemic lupus erythematosis. One of the women had got her chromosomal analysis done which was 46 XX, had androgen excess, pure gonadal dysgenesis.

Those women who did not fulfill the criteria for any of the causes were grouped as cases of unknown cause.

None of the women had a history of mumps, oophoritis, galactosemia, or ovarian haemorrhage or history of receiving cytotoxic drugs.

RESULTS

In all there were 21 cases in eight years who could be identified as hypergonadotropic hypogonadism amongst those subjects who came for investigations of pathological amenorrhea.

As shown in table I 42.46% subjects could be grouped as those with an unknown cause.

To ascertain the frequency of each cause of ovarian failure, the results of the present series were compared with those of others. Ascertainment bias was avoided in this comparison by including only survey based studies and not case reports. A significant group of patients showed presence of ovarian follicles which make it theoretically possible for these subjects to conceive.

As shown in table III, age of menarche did not help in distinguishing hypergonado-tropic state from others. However, this state is more associated with secondary amenorrhics than primary. Values of FSH and LH was significantly higher in women with afollicular hypergonadotropism.

The most frustrating part of the results was that none of these 21 patients conceived though theoretically pregnancy is possible in those with follicles being present. Of these 21, 4 could afford assisted reproductive techniques like donor oocyte programmes. They were referred for the same to the institutions in metropolitan cities

Table I

Subtypes

	No.	%
Resistant Ovarian Syndrome	04	19.05
Autoimmune cause	03	14.29
Afollicular	05	23.81
Unknown Cause	09	42.86
Total	21	

Table II

Comparative Figures

Source	No. of pts.	Resistant Ovarian Syndrome	Autoimmune	Afollicular	Unknown etiology
Board J. A. et al (1979)	38	01	01	06	00
Rebar RW et al (1982)	26	04	03	05	14
Zarate A et al (1980)	08	03	00	04	01
Russel P et al (1965)	81	04	13	64	00
Present series	21	04	03	05	09

Table III

Characteristics of women with hypergonadotropics hypogonadism

Characteristics	Resistant ovarian syndr. (n = 4)	Autoimmune (n = 3)	Afolicular (n = 5)	Unknown etiology (n = 9)
Age of menarche	13.1	13.2	12.8	13.1
Primary Amenorrhea	01	00	00	01
Secondary Amenorrhea	03	04	04	22
Previously fertile	01	00	01	03
Genital Atrophy	02	00	02	05
Age of 1st visit	24	28	28	29
Mean FSH (mlu/ml)	120.6	110.2	159.5*	98.8
Mean LH (mIu/ml)	106.5	110.8	143.6*	79.6

*P < 0.02 : Significant

offering these facilities. One was lost to follow up and three came back empty handed (without conception).

DISCUSSION

There are no classical features which could prove a hypergonadotropic hypogonadism. However around 30% subjects did show evidence of genital atrophy. Though all subjects in this series were amenorrhic, it has been shown by Rebar et al (1982), Szlachter et al (1979) and Wright (1979) that women with this condition may menstruate and even ovulate sporadically.

FSH and LH concentrations are the ultimate to clinch the diagnosis of this condition. It has been proved that even one value of FSH/LH greater than 50 mIU/ml concen-

tration is diagnostic of this state (Casper et al 1979).

Resistant ovarian syndrome remains a confusing diagnosis. Though it is recommended that in presence of hypergonadotropism if on ovarian biopsy follicles are demonstrated and all other causes are ruled out than one can call it a resistant ovarian syndrome (Rebar et al 1982). However whe ther an ovarian biopsy is a must is controversial. We have used sonological presence of follicles for the same.

Failure to bring about a conception remained the most frustrating part of this condition. All four patients classified as resistant ovarian syndrome were subjected to cyclic estrogen - progestrone therapy for 3 to 6 months followed by ovulation induction. Till date we have no pregnancies to report.

From the other groups four subjects were sent for donor oocyte programme and none have conceived till date.

Thus besides its peculiar hormonal profile and clinical bearing, this condition continued to be by and large refractory to treatment.

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