TREATMENT UNRELATED PREGNANCIES IN INFERTILE COUPLES

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ABSTRACT

We analysed 227 infertile couples to determine the frequency of pregnancies occurring without any specific treatment. Pregnancy occurred in 44 of 104 (42%) couples who were actually treated and 43 of 123 (35%) couples who formed treatment independent pregnancy group. Treatment independent pregnancy group accounted for 43 of total 87 pregnancies occurring in this study. The study demonstrates that the potential for spontaneous cure for infertility is high and many patients respond favourably to just attending infertility clinic rather than specific treatment.

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KEY WORDS: Infertility; Spontaneous pregnancies.

Introduction

The recognition of treatment-independent pregnancies is by no means new in management of infertility. Duncan [1] commented hundred years ago "A reputation curing infertility is spoken as if it were founded in substantial claim coincidence has been regarded as consequence". At that time treatment included trips to a holiday resort, pilgrimage, operations on uterus or cervix and massage. Now specially after the birth of Louis Brown there has been a great enthusiasm in management of infertility. Various highly successful assisted reproductive technologies (ART) have been developed in last couple of decades, yet it is surprising that rate of treatment-independent pregnancies remains high.

Pregnancy can be expected to occur among untreated couple with unexplained infertility [2] but it has also been reported in women whose both fallopian tubes were completely blocked [3]. Although treatment-independent pregnancy is common, yet there is paucity of controlled studies in this field [4]. It is important to evaluate each therapy since the cost of infertility treatment is increasing and it is becoming beyond means of large number of our patients.

Material and Methods

The study was conducted from 1st January 1992 to 31 December 1998. Total 263 couples who were infertile were recruited. 26 patients were lost to follow-up. 227 couples were followed-up for a period varying from 12 months to 60 months with an average of 24 months. Infertility was defined as failure to conceive after one year of intercourse. Treatment independent pregnancy was defined as pregnancy which occurred without any specific treatment or 3 months after stoppage of medical treatment or 12 months after surgical treatment. After registration, history was taken and exami-

nation performed. The diagnostic evaluation included measurement of basal body temperature (BBT), endometrial biopsy (EB), hystero-salpingography (HSG) and diagnostic laparoscopy in some cases. Cervical factor and Seminal factors were diagnosed as per WHO recommendation [5,6]. Ovulatory deficiency was diagnosed by BBT, EB and by serial ultrasound (USG) monitoring of developing follicle. The tubal factor was diagnosed by abnormal HSG and laparoscopy in some cases. Endometriosis was diagnosed by laparoscopy. Patients with azoospermia were not included in this study. The couples with no abnormality were classified as unexplained infertility group. All the patients were randomised into two groups. Group 1 (Treatment group) included the patients who were actually treated on the basis of their diagnosis. Group 2 (treatment independent pregnancy group). Detailed description of the patients forming each group are as per Table 1.

TABLE 1
Showing distribution of patients and pregnancies in each group

	No. of patients	Pregnancies
Couple actually followed-up	227	87
Couple registered in treatment group	119	59
Couples registered in treatment-independent group	108	28
Couples who were treated but pregnancy occurred 3 months after medical or 12 months after surgical treatment	15	15
Actual no. of couples in treatment-independent group	108+15 = 123	28+15 = 43
Actual number of couples in treatment group	119-15 = 104	59-15 = 44

Results

Pregnancy occurred in 87 (38%) of 227 couples who were registered and followed up in this study. Among the 59 pregnancies in treated group, 15 occurred more than 3 months after last medical treatment and 12 months after adenexal surgery. These 15 pregnancies and 28 pregnancies which occurred in untreated couples constitute the category of "treatment independent pregnan-

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cies". The 15 pregnancies classified as unrelated to treatment accounted for 17% of all pregnancies. The proportion of treatment independent pregnancies was not significantly associated with duration of infertility (Table 2). When the duration of infertility was less than 36 months proportion of pregnancies which were independent of the treatment was 46% as compared to 47% in treatment group. When the duration of infertility was more than 36 months proportion of pregnancies in treatment group was slightly higher -37% compared to treatment independent pregnancy group-22%. However the pregnancies in relation to primary clinical diagnosis were distributed differently (Table 3). Ovulatory deficiency was primary clinical diagnosis in 35% of all couples, in 53% of all treated couples and 73% of all treatment related pregnancies. On the other hand unexplained infertility was primary clinical diagnosis in 12.3% of all couples, in 7% of all treated couples and 6% of all treatment related pregnancies.

TABLE 2
Duration of infertility and pregnancies

Duration in months	Treatment group			Treatment independent group		
	No. of cases	Pregnancies	%	No. of cases	Pregnancies	%
12-23	43	21	49	35	17	48
24-35	23	10	43	27	12	44
36-46	20	8	43	20	8	40
48-71	11	4	37	21	4	19
more than 72	7	1	20	20	2	10
Total	104	44	42	123	43	35

TABLE 3
Primary clinical diagnosis and pregnancies

Clinical diagnosis	Treatment group Pregnancy/total cases (%)	Treatment independent group
Anovulatory	32/55 (58)	10/25 (40)
Unexplained	3/7 (43)	14/21 (67)
Cervical factor	1/5 (20)	4/6 (66)
Seminal deficiency	5/28 (18)	8/40 (20)
Endometriosis	0/3 (—)	2/7 (28)
Tubal factor	3/6 (50)	5/24 (21)
Total	44/104 (42)	43/123 (35)

Discussion

In this study of pregnancies occurring in infertile couples almost half the conceptions (49%) were treatment independent. 17% of pregnancies in infertile couples with ovulatory deficiency, 70% of the pregnancies in the patients having endometriosis and tubal defect, 58% of the pregnancies in the couples with seminal deficiency and 84% of the pregnancies in the couples classified as unexplained or cervical factor deficiency occurred in treatment independent pregnancy group (Table 4). The proportion of treatment independent pregnancies that we observed were compara-

ble with other studies. The simple pregnancy rates in various studies were 38%, 49%, 47%, 48% [7-8]. In our study the rate was 35%.

TABLE 4
Showing distribution of pregnancies among infertile couples

Clinical diagnosis	No. of pregnancies	Pregnancies in treatment group	Pregnancies in treatment independent group
Anovulatory	37	31 (83%)	6 (17%)
Unexplained	20	3 (15%)	17 (85%)
Cervical factor	6	1 (17%)	5 (83%)
Seminal deficiency	14	6 (29%)	8 (58%)
Endometriosis	2	0 (0%)	2 (100%)
Tubal factor	8	3 (37%)	5 (75%)
Total	87 (100%)	44 (51%)	43 (49%)

Reports that differentiate between treatment related and treatment independent pregnancies are not common in recent literature on infertility. Fifty years back Bender [9] found that 63% of 324 pregnancies among 700 couples occurred six months or more after treatment and Sharman [10] reported that 236 of 264 pregnancies among 1575 couples occurred in untreated couples. In 1969 Grant [11] reported that 35% of 1415 women conceived without treatment. Dunphy [12] reported 22% pregnancy rate as placebo response in sub-fertile couples. Speroff [13] reported that more than half of couples presenting after one year of infertility can be expected to become pregnant spontaneously in the following year. The definition of treatment independent pregnancies differ from author to author. Whichever of the several definitions of treatment independent pregnancy is used it is apparent from various reports that it accounts for more than one-third of conceptions in infertile couples. In our study it accounted for 49% of all pregnancies.

The treatment independent pregnancy has been attributed to the beneficial effects of diagnostic tests [11], counselling during clinic visits and placebo effect [12]. Our study does not rule out effect of diagnostic procedures and counselling on treatment independent pregnancies.

There is no agreement on length of time after completion of treatment during which its effect may be expected to persist. Interval of six months [9,15] and three months [14] after the medical treatment and 12 months after surgical treatment have been reported. We classified pregnancies occurring 3 months after medical treatment and 12 months after the surgical treatment as treatment independent pregnancies as per criteria used by Collins [15]

There has been marked difference in the rates of treatment independent pregnancy in relation of primary clinical diagnosis. This suggests that treatment recommendations should be according to the primary diagnosis. Among unexplained infertility patients 90% pregnancies in our study and 93% of those reported by Bernstein [14] occurred independently of treatment. If there is no clinical diagnosis after the conventional investigations the prognosis without treatment appears to justify the policy of observation. On the other hand in the patients where anovulation was the cause of infertility, 73% pregnancy rate was achieved after ovulation induction compared to 23% patients who conceived without treatment. These patients do not deserve wait and watch policy, they must have benefit of treatment.

We conclude that possibility of spontaneous and treatment unrelated pregnancies in infertile couples is high. A more controlled evaluation of therapy for infertility is required to isolate the benefits of treatment from the effects of chance and time.

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