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The Infertile Couple

Part I. Schedule of Management

J. A. VAN ZYL

SUMMARY

The regimen for the management of couples who complain of infertility is presented as it is practised at Tygerberg Hospital. The doctor-patient relationship, the importance of the patient's comprehension of the specific treatment regimen and why it should be adhered to are stressed. Special investigations are discussed and certain pitfalls in the management of infertile couples are pointed out.

Controversy still exists with regard to many aspects of the management. Decisions about when to start with infertility investigations, whom the couple should consult, whether they should be examined as a couple or separately, and how long they should receive treatment are dealt with.

S. Afr. med. J., **57**, 446 (1980).

'Yet the medical curriculum does not permit much time . . . to acquire the specialized knowledge needed for adequate management of the infertile couple.'

Sophia J. Kleegman, 1966

In the past the customary procedure for handling infertile couples was to refer the wife to a gynaecologist and the husband to an urologist. Fortunately for infertile couples and for physicians, leading scientists all over the world have reached the stage where the importance of handling these couples as a unit is realized.[1-3] As a result of this breakthrough, infertility clinics or units have been established at teaching hospitals and research institutions.

An infertility clinic started at Karl Bremer Hospital, Bellville, during 1967 was transferred and expanded to a department at Tygerberg Hospital during 1970. Through experience and after having visited several infertility clinics in Europe and the USA, I planned an effective schedule for the management of infertile couples, consisting of registration and four consultations at the infertility clinc.

Registration

Patients, irrespective of their age and period of infertility (primary or secondary), are registered at the clinic for their first consultation. At registration the medical receptionist notes down the basic general information about the couple. The only prerequisite is that they must be willing to come as a couple and to be submitted to all routine investigations, even if some of these have already been done previously. Patients are requested to forward to the clinic all obtainable reports of previous investigations.

First Consultation

The core of the first consultation is the interaction between the couple and the doctor (Fig. 1). The doctor must try to establish a warm *rapport* with the couple and give

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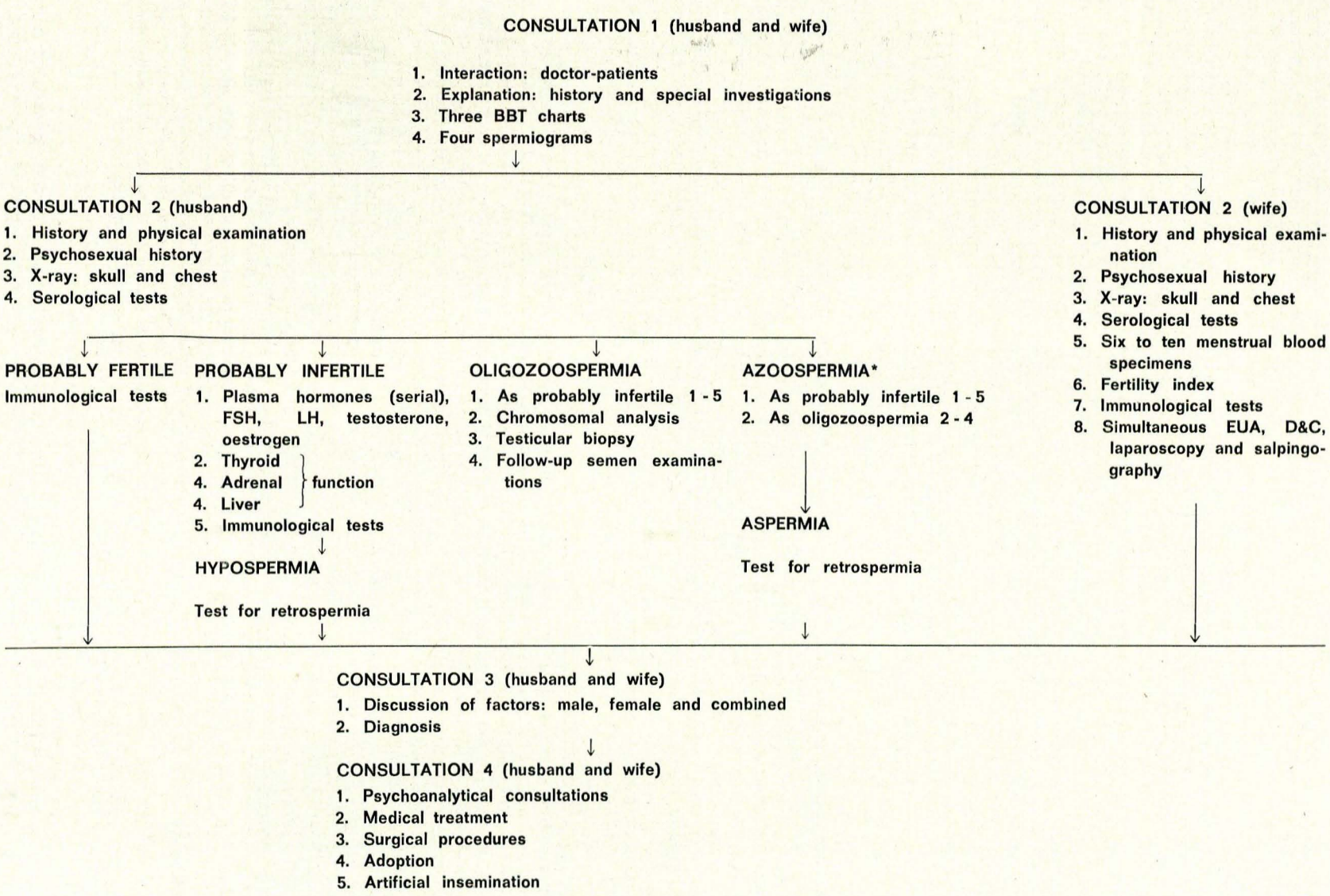

* Diagnosed with the Shandon-Elliot cytocentrifuge and stained with the standard Papanicolaou method.

Fig. 1. Schedule for serial consultations in the management of infertile couples.

them the opportunity to discuss all possible uncertainties and to minimize embarrassment. The regimen of examinations and special investigations is explained to them, since it is very important that the couple should know how and why each test is done. It is pointed out why a detailed history and in-depth questioning with regard to their sexual relationship will be required. The importance of absolute honesty and correct information is stressed. Adequate time (at least 1 hour) must be allocated to the first consultation, so as to give the doctor enough time to question and to motivate the couple and to give them sufficient time to ask questions and discuss their problems. The couple should terminate this consultation, since if they do not feel satisfied and have not been motivated and 'gained' for the schedule that will follow they will default. They must feel at ease among the staff and in the surroundings of the clinic.

Why and how the first three basal body temperature (BBT) charts must be kept is explained to the wife. The fact that the BBT must be taken vaginally and by means of a fertility thermometer must be emphasized. The main function of the chart is to reveal to the doctor and the patient important preliminary facts about the patient's hypothalamic-pituitary-ovarian axis. If a well-planned BBT chart is used, it also reveals significant information about the couple's psychosexual attitudes. The frequency of coitus and the occurrence of male and female orgasm can be observed from a special BBT chart that I compiled. The average number of days of menstrual flow, duration of each menstrual cycle, and character of the menstrual cycle (biphasic or not) can point out to the doctor the exact day to begin the daily follow-up cervical mucus investigations, postcoital tests and hormonal assays. This information is compiled on a fertility index (J. A. van Zyl — unpublished data).

In some cases, especially in badly motivated or uncooperative patients, the BBT chart has an adverse emotional effect, but its main purpose is its clinical significance for the doctor. Patients must regard it as a routine procedure and keep it regularly. Coitus must take place at intervals of not longer than 3 - 4 days, without regarding the BBT chart as an indicator for planned coitus.

The wife is told that she must come to the clinic when there is a strong flow of menstrual blood during each consecutive menstrual cycle. At least six specimens of menstrual blood are sent for the culture of *Mycobacterium tuberculosis* and inoculation into a guinea-pig.

Male patients are told that they will have to produce at least four semen specimens at specific intervals and by appointment at the andrology laboratories. From examination of these semen specimens, a spermiogram is compiled. This will be discussed in detail in Part II of this article.

Second Consultation

During this consultation the couple is handled by the 'infertility team' which consists of a gynaecologist (head of the department), a senior medical officer, a registrar, sisters and nurses, a medical receptionist, a typist, a senior professional officer and technologists. All members, except the registrar, are permanent staff. It is of paramount importance that patients are not confronted with strange personnel every time they come back, which would give them the idea that they are starting anew at each consultation. Each new person on the staff is regarded as yet another stranger to whom they are obliged to discuss very personal aspects of their problem. A continuous or regular change of staff, especially doctors, can be singled out for the adverse effect it has on couples who attend infertility clinics.

The time usually allocated to this consultation is 1 hour, because the husband and the wife must initially be questioned separately. An extensive history is taken and thorough questioning takes place with regard to the psychological and psychosexual aspects. Skilled and sympathetic questioning brings unexpected insight to both doctor and patient. Whereas in certain fields of medicine emotional commitment should be avoided, it cannot be disregarded in infertility; to avoid this purposely creates barriers to spontaneous response. Some physicians are too busy or temperamentally unsuited for this phase of the examination, particularly if the problem is psychosexual. A very apt comment on counselling comes from Kleegman:[1] 'Good history taking is an art based upon knowledge, experience, and listening with the inner ear, which is part of the physician's own personality and awareness. To know what questions to ask, how to ask them, the tone of voice to use, and to interpret what the patient says, what she does not say, and what she really means — all of this our medical education does not yet teach adequately.'

A thorough physical examination, with special attention to the genital organs, is conducted on both husband and wife and special investigations are carried out on both patients (Fig. 1). At the commencement of the wife's next menstrual period, she must come to the clinic for daily follow-up investigations to obtain data for the fertility index.

An examination under anaesthesia, laparoscopy, hysterosalpingography, and dilatation and curettage are carried out on any day from the 24th day until just before the onset of menstruation of any menstrual cycle. The material obtained is divided into two portions: one is put into normal saline for culture and sensitivity for *Mycobacterium tuberculosis* and for guinea-pig inoculation, the other is put into formalin for histological examination for tuberculosis and to determine the endometrial phase. Laparoscopy and hysterosalpingography are carried out simultaneously, since they are of no diagnostic, prognostic or statistical value if done on different occasions or if one of these procedures is eliminated.

Experienced gynaecologists can make an accurate diagnosis of pathological conditions, take biopsy specimens and perform cauterizations and operations with the aid of a laparoscope. They can also select patients for abdominal surgery and follow-up with laparoscopy to evaluate the outcome. A gynaecologist who has performed at least 1 000 laparoscopies should be a master of the instrument (R. Palmer — personal communication).

Third Consultation

This consultation is crucial in the management of the infertile couple, and both husband and wife must be

present. The results of all special investigations are available, and male and female factors as well as the combined factors contributing towards infertility are discussed. It is often only at this stage that some patients come forward with psychosexual problems such as lack of orgasm, premature ejaculation, impotence, feelings of guilt about premarital or extramarital sexual relationships, and deep-seated emotional problems. Some physicians are of the opinion that these matters belong to psychiatrists, but a gynaecologist willing to learn can acquire the training and experience to make a diagnosis in most of these cases and treat up to 80% of psychosexual problems related to infertility.[1] The rare cases of psychosis are referred to psychiatrists, but it is questionable whether these patients should be helped to conceive. The time allocated to this consultation is at least 1 hour.

An unjustified, unfavourable diagnosis, an erroneous diagnosis, in fact, any diagnosis that may imply unnecessary emotional trauma places a severe responsibility on the physician because this has been proved to have an undesirable effect on the couple's personal relationship, on their marriage and on their chances for achieving conception. For instance, to tell a patient 'Your testes are too small', 'It is a hopeless case' or 'There is nothing I can do for you' reveals the incapacity to communicate appropriately with patients who are already under stress. When it is justified to let the patients understand that there is nothing one can do for them, this fact must be put across in such a manner as to preserve the patient's self-esteem and to lessen emotional trauma. It is also not advisable to tell patients that they are 'normal'; they should rather be told that nothing abnormal has been found. The reason for this is that too many contributing factors are still unknown and false impressions must be avoided.

Alternatives for solving the problem of infertility must be discussed in detail with couples who have a bad prognosis. Adoption can be recommended in case of female sterility and therapeutic donor insemination in cases of male sterility. The advantages and disadvantages of both these procedures must be discussed and couples must be asked to think the matter over for at least 6 months before they finally decide which procedure will suit them best and must be given preference. Artificial insemination with the husband's semen can be discussed too, but Behrman and Kistner[2] report a conception rate of only 3% after this procedure. I have found that only 4,6% of conceptions occurred after 536 inseminations in 66 women. Some of these patients achieved conception spontaneously in spite of severe oligozoospermia, according to my classification.[4]

Fourth Consultation

The course of this consultation depends on the outcome of the third consultation. It may include exposure to psychoanalytical, medical and surgical treatment for both husband and wife and may continue over years.

Patients who default during the course of investigations but later return for further treatment follow the routine from where they stopped. These are the most difficult cases, since there is a lack of co-operation and also on account of the age factor in the female patients.

With patients who come from distant places, the regimen of investigations must be curtailed. These patients go through the first three consultations within 3 weeks, commencing at the onset of a menstrual cycle. After the third consultation they are referred back to their nearest physician or asked to come back to the clinic if conception is not achieved within 6 months.

DISCUSSION

The generally accepted approach that no specific infertility investigations should begin until at least 18 months after the couple have started trying to have a family originates from Taiwan and the USA.[2] According to these estimated studies of a general population, 25% achieve pregnancy within 1 month of not using contraception, 63% within 6 months, 75% within 9 months, 80% within 1 year, and 90% within 18 months! This may be the case in a general population, including highly fertile couples who have used contraception, but couples complaining of infertility present an entirely different situation.

The question whether investigations should be postponed, even if the period of infertility is shorter than 1 year, is not even debatable, since there are important reasons why the opposite is necessary. Couples who complain of infertility all have a definite problem and find themselves in a situation with which they are unable to cope. Even the mere decision to seek medical advice does not come easily to the infertile patient. This seeming reluctance to consult yet another doctor about infertility problems may originate from a variety of psychological factors such as shyness, fear, ignorance, religious barriers, personality traits, psychological trauma and despondency. One intelligent and well-balanced patient who had been treated elsewhere by several physicians later stated that she had several times wanted to make an appointment, hesitated, and decided against it, and then described the emotional effort to finally make an appointment at the clinic.

These attitudes indicate that immediate steps should be taken to deal with any complaints of infertility without delay, even if only by discussion with a couple to put them at ease, after which conception may occur spontaneously. No couple is turned away from the clinic, even if the wife is approaching 40 years. In these cases, although the woman will not necessarily be submitted to all special investigations, she must still be regarded as a patient who is seeking help, and this may be the physician's last opportunity to help her emotionally to come to terms with her barrenness. Women of 40 years and over should be regarded as patients who should be helped to conceive, provided they are in good physical condition and are submitted to amniocentesis.[5] I have found that all women over the age of 35 must be submitted to amniocentesis.

There are conditions (of which some will be mentioned below) which, if diagnosis and treatment are delayed, may have far-reaching consequences. Table I shows the inci-

TABLE I. FACTORS THAT INFLUENCED FERTILITY IN A GROUP OF 645 INFERTILE COUPLES[4]

Factor	Incidence (%)
Infection of the male genital tract	**29,2**
Endometriosis*	**24,5**
Varicocele	**21,2**
Chromosomal aberrations	**10,8**
Tuberculosis of the female genital tract*	**7,6**
Cryptorchidism	**4,2**
Syphilis	**2,5**
Combined factors†	**48,5**

* J. A. van Zyl — unpublished data.
† Both husband and wife had one or more influencing factors, excluding hostile cervical mucus.

dence of these conditions, which not only require a long exposure to treatment but will impair fertility progressively during any delay and will destroy fertility completely if left untreated.[4]

Endometriosis, tuberculosis of the female genital tract and adhesions of the pelvic organs in most cases required a period of approximately 2 years' treatment before patients can hope to conceive. These conditions often recur, so that all cases necessitate follow-up laparoscopy and hysterosalpingography. Treatment should not be terminated unless the physician can completely rule out a recurrence of the pathological condition; the period of treatment in cases of infertility can not be determined by lapse of time only. Therefore, the attitude that infertile patients should be exposed to treatment for only 2 or 3 years should be denounced.

Moghissi[3] mentions a 'crash program' for exceptional cases, during which hysterosalpingography, dilatation and curettage, laparoscopy and a complete endocrine survey are done to evaluate infertility factors. Taking into consideration the whole situation of the infertile couple, this schedule cannot be advocated except when insurmountable problems influence the patient's time.

For male patients there are also no short cuts to examination and treatment. For instance, oligozoospermia and immunological conditions may require more than 2 years' treatment. The patient's physical and emotional condition and the period of spermatogenesis (see Part II of this article) determine the time of exposure to treatment.

The exceptionally high percentage of cases (Table I) with a combined factor is indisputable proof that both husband and wife should be examined as a couple simultaneously. Valuable time is lost if either the husband or the wife is selected for treatment, of which the outcome must first be evaluated before the other partner is examined or treated.

Some chromosomal aberrations of either the male or the female patient call for adoption or therapeutic donor insemination, two procedures which usually involve long periods of waiting. However, to suggest adoption too soon for infertile couples with no chromosomal aberrations, even for fertile patients (unexplained infertility), is unwise, since the couple may have children of their own after adopting a child, which in itself is of no harm. The myth that in cases of unexplained infertility conception will follow the adoption of a baby exists among the lay public and in medical circles. Rock *et al.*[6] have published a control study in which it was found that 22,9% of couples who adopted a baby subsequently had children of their own, while infertile couples who did not adopt eventually had a conception rate of 35,4%. These findings do not support the idea of adoption as a 'cure' for infertility, and it can in many cases be regarded as the easy way out.

There is, however, a serious drawback to unnecessary adoption, in that the number of babies available for adoption has greatly decreased; those available should preferably be allotted to sterile women only. Fortunately the organizations responsible for the management of adoption now realize the importance of having a couple's fertility prognosis determined thoroughly before allotting a baby to them.

Except for a very few clinics, couples who complain of infertility are confronted with the situation that the wife is treated by a gynaecologist and the husband by an urologist, thus separating the couple in a situation which concerns them as a marital unit. The only communication between the gynaecologist and the urologist is a formal exchange of diagnosis and recommendations with regard to treatment. The determination of psychogenic, psychosexual and immunological factors and penetration and migration tests cannot be managed satisfactorily, if at all, in these circumstances. In private practice there is no other way out, but private practitioners, in some cases, soon recognize the stage when patients should be referred to infertility clinics where the suggested regimen for investigation of the infertile couple will be followed because of the many advantages involved.

In leading infertility clinics in different countries,[1-3] to mention a few, I have perceived that an experienced physician at the head of an infertility unit determines the professional and social climate essential to infertility management. With regard to this, Moghissi[3] stated that: 'A well-informed and sympathetic physician who is capable of establishing good *rapport* with these patients and initiating an orderly, meticulous, and progressively comprehensive program of investigation and management may provide them with an immense measure of physical and mental comfort'. No matter how many other permanent members of the staff there may be, there should be one person in the key position with whom patients can identify themselves.

Patients who have secured a good doctor-patient relationship will understand that certain aspects of investigation and treatment must be delegated to other specialized members of the staff. This will then not be a disturbing factor, since patients will realize that the head of the clinic is the person to whom every member of the staff relates and from whom patients can expect individual and dedicated attention. It cannot be overemphasized that infertile couples should never feel that they are being shuttled from one member of the staff to another without staff links.

Husbands and wives must be examined and investigated simultaneously and as a marital unit in order to give both a better understanding of each other and of their situation with regard to the regimen of investigations,

prognosis and treatment. They also become aware of the moral support they can offer each other; together they learn about their problem. The physician will be in a better position to compile satisfactory fundamental information about the couple if he represents intermediate contact between husband and wife.

However, when the couple's sex history is taken and their psychosexual problems are discussed the husband and wife should be interviewed separately. The physician will never get to the core of sexual and psychosexual problems unless each partner is given adequate opportunity and time to speak freely and without inhibitions and restrictions of any kind. Table II shows the incidence of psychosexual problems which were in some cases the sole cause of infertility and in others a major contributing factor not only to the problem but also to the couple's impaired personal relationship.[4] Table II also shows that 61,5% of patients who complained of infertility had psychosexual problems. These couples not only had the distressing problem of infertility, but in addition the burden of unsatisfactory sexual relationships. The pregnancy rate after simple discussion of psychosexual problems showed that these problems were the main cause of infertility in the particular cases. If these couples had not been questioned by the same physician the core of the problem would probably have remained concealed.

TABLE II. INCIDENCE OF PSYCHOSEXUAL PROBLEMS IN A GROUP OF 374 COUPLES WHO COMPLAINED OF INFERTILITY[4]

	Number	%
No psychosexual problems	**144**	**38,3**
Unilateral (male)	**44**	**11,8**
Unilateral (female)	**61**	**16,3**
Bilateral	**125**	**33,4**

Unless couples are handled as a unit, they are more inclined to desert. Ward[7] describes a 47% default rate and quotes Frank who found 42% and Ferreira *et al.* who found 35%. The author had previously found that close to 30% of couples default before all special investigations have been completed. After questioning some who eventually did come back, he realized the importance of allocating enough time to each couple to explain each facet of management, since at the time they registered at the clinic most of them were despondent and perplexed. The author also found that patients responded more during consecutive consultations. Since the schedule of consecutive consultations has been implemented, the default rate has become less than 10%.

It is not only important to patients to prevent default but also for academic purposes. Accurate and significant statistical findings can only be compiled after couples have been examined thoroughly and completely and according to international standards. It is unwise to base statistical findings on examinations and investigations done elsewhere, because the minimum basic investigations set out by the American Fertility Society[8] are not performed in all clinics.

A 10-year survey of 1 025 couples who attended the infertility clinic at Tygerberg Hospital revealed the following statistical findings (J. A. van Zyl — unpublished data): the conception rate during the period from the first to the third consultation, i.e. before commencement of medical and surgical treatment but during the course of discussion of psychosexual problems and special investigations, was 65,7%. This pregnancy rate is indicative of the importance of establishing a relationship and an atmosphere that will encourage patients to discuss their psychosexual problems in confidence but candidly and of reserving enough time for in-depth questioning concerning these matters and for sexual education. The pregnancy rate in the same group of patients after medical and surgical treatment, i.e. during the period of the fourth consultation, was 34,3%. The overall pregnancy rate was 56,4%.

CONCLUSION

The management of couples who complain of infertility is time-consuming and demanding. It should not be entered into by physicians who cannot devote the necessary time and manifest great patience and compassion.

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