

PROSPECTS FOR THE CHILDLESS

by ARTHUR P. CAMILLERI

Department of Obstetrics & Gynaecology University of Malta

Over the past three hundred years the population of the Maltese Islands has multiplied four-fold. In the year 1676, when the beginnings of our Medical School were instituted, an estimate of the population would have been in the region of 80,000 persons (Camilleri, 1954); to-day it exceeds 320,000. Indeed our islands to-day are among the most densely populated places in the world.

Much concern has been voiced about over-population. To decry high birth-rates has become the fashionable slogan of most Governments. Conversely it is almost unthinkable to waste time and money on the plight of the childless. It is ever so much easier to obtain financial support for research into the limitation of fertility than into the cure of infertility. The number of couples involved in relation to fertility is proportionally small, and hence numerically weak. Moreover, it is often alleged that the duration of treatment tends to be distressingly long and that the ultimate results are hardly more successful than in the untreated.

The sorry plight of infertile couples has attracted my interest for several years. My experience leaves no shred of doubt that their silent suffering deserves to be shared and if possible relieved. I believe, too, that with perseverance the success rate can reach satisfying proportions. And I envisage that the prospects are becoming brighter.

In private practice between 1969 and 1975 I have had 332 couples who sought advice about their infertility, an average of 47 per year. Yet so many of them seemed to become readily disheartened, in some cases because they expected "miracle" pills or injections, in others because the husband would not countenance the idea that he should be investigated, and in many cases for no clear reason at all. In my series there were 53 couples who attended only once (17.5

per cent) and another 58 couples only twice; so that more than one-third of the initial couples (actually 35 per cent) failed to persevere beyond the second visit. This failure of perseverance accounts, in my view, for the commonest single factor that prolongs the childless state of infertile couples. It seems so difficult for the doctor at the couple's first attendance to steer an honest course between a fervent encouragement for investigation and treatment and a truthful declaration of their probable chances for a pregnancy.

In considering further this factor of perseverance, I found that out of the remaining 216 couples there were 88 who stopped attending before the lapse of 2 years, and another 24 couples ceased attendance after 2 years or more. These 112 patients had a mean duration of attendance of 17.25 months. If we aggregate the couples who only gave up after 2 or more years together with the couples who are still attending or have achieved a pregnancy or were provisionally discharged (usually due to resistant azoospermia) then we reach a total of 128 couples whom I wish to classify as the Perseverers. These amount to 38.5 per cent of the original number in my series.

In this series there were 86 couples who achieved one or more pregnancies. All 86 of them now have at least one live child. The resultant pregnancy rate is depicted in Table I in relation to the degree of perseverance as already discussed. It is pointed out that a pregnancy resulted in a quarter of the entire series, and in no less than two-thirds of the persevering couples.

These figures, I submit, justify my belief that with perseverance the success rate in the management of infertility can reach satisfying proportions.

I have also expressed the belief that the prospects for success are becoming brighter. This belief I think, can be justi-

Attendance	Number of Couples	Per cent of initial series	Pregnancy Rate
All couples	332	100%	25.9%
Excluding one or two visits only	216	65%	39.8%
Perseverers	128	39%	67.2%

fied on several counts. And I propose to illustrate some of the clearer indications of progress in this regard.

In the first instance there is a greater awareness and acceptance of the fact that the husband quite often carries a substantial part of the blame for the couple's infertility. More men are expecting to be examined and treated in cases of infertility. The concept of Meaker's Index is helpful: it asserts that the fertility of a couple is a product of the fertility of both husband and wife. In other words if the wife's fertility is half the normal and the husband's is also half the normal, then their combined fertility is only a quarter of the normal ($0.5 \times 0.5 = 0.25$); whereas if the wife has a normal fertility and the husband's is half the normal, their fertility remains half the normal ($1.0 \times 0.5 = 0.5$). A deficient semen is a case in point. In my series of 332 couples there were 83 men who did not undergo a semen analysis; of the remainder no less than 173 had a deficient semen, including 36 who had absolute azoospermia or only a few non-motile spermatozoa.

The treatment of male infertility is attracting greater scientific attention, and slow but steady progress is being registered. In a way it is unfortunate that there are few specialist Andrologists for the husband in the sense that there are Gynaecologists for the wife. For instance the investigation of deficient sperm still leaves much to be desired, and the treatment is often somewhat arbitrary. On the other hand some drugs do prove effective in certain cases, such as some androgens (especially when they do not materially inhibit the pituitary) as well as the gona-

dotrophic hormones and more recently the pituitary gonadotrophin releasing factors.

In the case of the wife the investigation and treatment are more realistic, although established misconceptions are difficult to eradicate or modify.

Many women keep a basal temperature record very faithfully, and they continue to believe that they must wait for the mid-cycle rise in temperature before having intercourse! Surely this practice is a mis-use of the onset of the Safe Period. I have had several couples who overcame their infertility apparently only on adopting more correct advice than they had previously been given.

Another disquieting practice from the point of view of subsequent infertility is the use of the Pill in certain cases. Elsewhere (Camilleri, 1970a and 1972a) I have emphasized that adolescent girls who have been given the Pill for longer than 6 months (for such purposes as physiological amenorrhoea of puberty, or menorrhagia, or dysmenorrhoea) run a real risk subsequently of failing to ovulate regularly, and consequently of being infertile; their anovulant infertility is also rather resistant to treatment.

Ovarian dysfunction is in fact a common contribution to a couple's infertility. Two deficiencies may be highlighted; on the one hand ovulation may be absent or merely occasional, and on the other hand the luteal phase in each cycle may be too short (hence not allowing enough time for the endometrial development that permits proper implantation). The basal temperature record is very helpful in identifying these two faults. And their correction

can often be achieved by modern drugs (clomiphene, cyclofenil, gonadotrophic hormones, bromocriptine). I might emphasize that in some women the principal defect lies in the marked shortness of the luteal phase, and that in such cases the exhibition of ovulatory therapy is indicated from the earliest day possible in each menstrual cycle. I have increasingly adopting this regimen in my practice; there have been 52 such cases in this series (mostly in the last 4 years), and 16 of them became pregnant.

As the physiological mechanisms and processes entailed in ovulation, fertilization and implantation (Camilleri, 1972b) continue to be studied in earnest, it is inevitable that further advances will follow in the management of infertility. The effect of certain antibiotics at the time of ovulation, the influence of aspirin and other anti-inflammatory drugs on prostaglandin levels and hence on fertility in men and in women, the intricacies of spermatozoal capacitation, observations of this kind will command attention and eventually lead to practical and effective measures.

It may be, however, that some women will remain resistant to all treatment aimed at inducing their ovaries to ovulate. Much research is proceeding apace to achieve in-vitro fertilization and, after early cleavage of the fertilized human ovum, to transfer the embryo to the woman's womb. We are ourselves looking into a different approach, namely that of homograft transplantation of the ovary (Camilleri et al., 1976). We believe that for women with absent or non-ovulant ovaries a successful ovarian orthotopic homograft would probably be more acceptable than test-tube fertilization and subsequent in ovulation. The former procedure would carry several advantages over the latter: it involves less surgery, it is technically easier, it may prove more lasting, it appears more natural, and it is probably genetically safer.

Finally one might recall that the childless may indeed be quite fertile (Camilleri, 1968). Here one has particularly in mind the couples faced with recurrent

abortions. I have no doubt that the most rewarding single factor in the management of these women is the patient imposition of absolute rest in bed from the earliest stage possible in the pregnancy to at least 15 weeks gestation. This measure is essential whatever the underlying cause for the recurrent miscarriages; in other words, even in patients who require a Shirodkar suture for cervical incompetence. This measure, in fact, may itself prove effective enough in some women with congenital malformations of the uterine cavity, thereby obviating the need for the hysteroplasty operation which might otherwise become indicated (Camilleri, 1969). Concerning the use of progesterone depot preparations I cannot refrain from stressing their probable uselessness and their unwarranted hazards: whereas we have shown that progesterone is worse than ineffective in the management of threatened abortion (Camilleri and Montanaro Gauci, 1971) and others have found no evidence that progesterone increases foetal salvage in preventing recurrent abortion, yet it is well established that certain progestagens may exert a virilizing effect on a female foetus and it is becoming clear that sex steroids taken by the mother during pregnancy may influence the adult sex behaviour and fertility of her offspring by the manner that the brain becomes programmed (Camilleri, 1970b). It is disconcerting that such iatrogenic risks should persist without any commensurate basis for the effectiveness of the therapy.

Undoubtedly many a childless couple is an unhappy couple. Within the limits of genetic and developmental well-being, their lot deserves every attempt at amelioration. With perseverance many of them should be confident in achieving a child of their own.

References

- CAMILLERI, A.P. (1954): in Transactions, Sixth International Congress of Catholic Doctors, Dublin. Irish and Overseas Publishing Co. Ltd. p. 276.
- CAMILLERI, A.P. (1968): St. Luke's Hosp. Gaz., 3, 90.
- CAMILLERI, A.P. (1969): Int. Surg., 51, 259.

CAMILLERI, A.P. (1970a): in Proceedings, Sixth World Congress of Gynaecology and Obstetrics, New York, Williams and Wilkins Co. p. 307.

CAMILLERI, A.P. (1970b): Practitioner, 204, 406.

CAMILLERI, A.P. (1972a): Zeitschrift für Therapie, 5, 282.

CAMILLERI, A.P. (1972b): St. Luke's Hosp. Gaz., 7, 46.

CAMILLERI, A.P. and MONTANARO GAUCI, N. (1971): Obstet. Gynec., 38, 893.

CAMILLERI, A.P., MICALLEF, T., ELLUL, J. and SAID, J. (1976): Transplantation, 22, 333.