STERILITY IN WOMEN : SOME CLINICAL OBSERVATIONS.

By W. McK. H. McCULLAGH, D.S.O., M.C., F.R.C.S.

Senior Obstetric Surgeon, City of London Maternity Hospital : Surgeon Samaritan Hospital.

ONE in eight marriages are sterile and after two years of married life, anxiety is often shown by childless wives.

I have been somewhat gratified by the success one can obtain in the treatment of this condition and during the last ten years have had several interesting facts regarding conception forced upon my attention.

The birth-rate in this country is 15 per 1,000 and is now the lowest in the world not excepting Sweden.

Sterility, more than any other condition, requires in its treatment close co-operation between the general practitioner and the consultant gynaecologist, if really good results are to be obtained.

It is very regrettable that voluntary hospitals more often than not, thrive on the lack of contact between the consultant and general practitioner. In sterility cases 20 per cent. are due to the male, and it is only when the case is sent by her doctor that the male cause is excluded in the general run of hospital cases.

The family doctor living near is the person to examine the semen in a fresh state, and exclude the male cause, by the detection of live spermatozoa which he can easily do in the early morning or late in the evening by their examination under the low power of the microscope.

If a female less than two years married expresses the desire for a child, she should be interrogated as regards her marital relations which are not infrequently misunderstood. She should be examined and if no obvious bar to conception is present such as a tight or painful hymen, vaginismus, fibroids retroversion, salpingitis or a long conical cervix, then she should be given medical treatment and advice as regards posture after coitus.

Medical treatment is certainly of great assistance and many factors are involved if high figures of success are to be achieved.

(1) Thyroid medication in proportion to the body weight can result in pregnancy. It increases menstrual loss reduces adiposity and improves female virility.

An interesting example of this was a 17-stone Jewess who attended a gynaecological hospital for obesity. She was put on thyroid and a meat diet. Her weight fell, she became pregnant and continued her treatment of meat diet with the result that she was admitted to a maternity hospital in a state of eclampsia.

Hormotone is often prescribed but owes its success to the thyroid therein.

(2) Tobacco acts deleteriously on the sex organs, male and female, and I know of pregnancy following the abstinence of smoking by the husband.

(3) Injections of liq. folliculi in the form of glandubolin agomensin, lutelin, have resulted in success in a few cases.

(4) Seaside holidays in the summer add a powerful physiological stimulus to conception and the best operative results are obtained when performed in the early spring, so that this aid may have its greatest effect. Holidays apart from the husband who

should lead an outdoor a life as possible and should include the time of the period are helpful.

(5) Vitamin E in the diet is beneficial, e.g., lettuce, tomatoes, nuts and eggs.

(6) Time of coitus. Ovulation occurs during the middle of the monthly cycle but clinical knowledge points to the belief that a few days after the period is over, or a few days before it is due as the most likely time for fruitful coitus.

Orgasm on the part of the wife is of definite assistance and literature such as "Married Love" is helpful.

(7) Vaginal medication. Softening of the cervix by glycerine tampons and hot douching with sodium bicarbonate or lactic acid assists by removing mucus and discharges.

Surgical treatment is indicated if the couple are over two years married or if any of the above-mentioned gynæcological conditions are found on examination.

The treatment of the following has resulted in success.

(1) Dysmenorrhœa with two years of sterility. Dilatation of the cervix and insufflation of the tubes is indicated.

(2) Displacements of the Uterus. (a) Retroversion lessens the chance of conception. It is associated with dyspareunia, backache before the period is due, prolonged periods, and if the retroverted uterus presses on the ovaries there is mental depression and irritability, nausea and dyspepsia with epigastric pain. Replacement of the uterus and the insertion of a pessary to keep the uterus forwards frequently is soon followed by conception. If it has not occurred in four months' time then an insufflation of tubes and ventro-suspension should be considered. (b) Prolapse can cause sterility. This is proved in the gynæcological out-patient department by the frequency with which the insertion of a ring for prolapse is followed by pregnancy. My attention was first called to this fact by patients refusing to wear a pessary because of this fear.

I have also found that the use of an abdominal belt for visceroptosis conduces to conception.

(3) Impervious Fallopian Tubes.

The blockage of the tubes may be due to gross factors, such as salpingitis, and success may follow bilateral salpingostomy. I have had two such cases. Usually the permeability is merely impaired by internal stickiness due possibly to the use of contraceptives or to a mild infection.

These cases give good results, 17 to 30 per cent., if treated by tubal insufflation. The pressure of the manometer in such cases often shows a rise to 140 mm. or so, and then a sudden drop as if some obstruction were relieved. The obstruction may be a kink in the tube or some fluid or clot in the tube or close approximation of the tube walls.

Not infrequently I have found the tubes impervious to gas up to 200 mm., and yet had such cases subsequently become pregnant. In these cases the obstruction is due to thickened endometrium at the cornua, and if this is removed by a curette and insufflation is again tried it is often successful.

Tubal insufflation should not be performed if any trace of salpingitis is present as evidenced by thickened tubes, and the manometer should not be allowed to rise above 200 mm.

(4) Cervicitis can cause sterility, and is not uncommonly the cause of one child

sterility. I have seen several women who have had a difficult labour with a stillbirth, who have subsequently suffered from a lacerated cervix, leucorrhœa and sterility.

All such cases, unless the cervix is lacerated, when a repair or partial amputation is indicated, I now send to electrotherapeutists. They cure the discharge in six treatments and are successful in 80 to 90 per cent. of chronic gonorrhœa cases when the cervix and urethra only are involved. Six months after the successful treatment of the cervicitis they should have a tubal insufflation performed which can then be done without risk of infecting the tubes.

(5) Fibroids cause sterility and miscarriage. Myomectomy is indicated.

(6) Vaginismus or a tight hymen is not infrequent in the newly wed, and if not too marked can be cured by the passage night and morning of a vaginal dilator. The medical advisor should pass the instrument—as large a one as the vagina will hold. Ask the patient to remove it, and then show her how to re-insert it. She can then carry on her own treatment.

If they have been married some time then they are best treated by a stretching of the cervix and vagina under an anæsthetic with the end of a Sim's speculum.

A perineoplasty is also sometimes needed.

There are cases of relative sterility between men and women who are not sterile, with other members of the opposite sex. Such cases are rare, and no explanation has yet been made to account for the phenomenon.

At the Samaritan Hospital for Women in the four years, 1927-30, I operated on 67 cases of sterility. Of these 55 were traced, and 16 found with successful results, i.e. 29 per cent.

The following is a list of the ages, operative treatments, and lengths of time of marriage :—

	Age	Years married	Operation
1	25	2½	Dilatation; insufflation
2	29	8	Salpingectomy; salpingostomy
3	30	?	Dilatation and perineoplasty
4	35	9	Dilatation; insufflation; myomectomy
5	32	5	Dilatation; insufflation; ventrosuspension
6	23	2	Dilatation; insufflation
7	33	3	Myomectomy
8	32	1½	Dilatation; insufflation
9	28	7¼	Dilatation; insufflation
10	29	2½	Dilatation; ventrosuspension
11	25	2	Dilatation; insufflation
12	30	7½	Dilatation; insufflation; ventrosuspension
13	34	7½	Dilatation; insufflation
14	30	3	Dilatation; insufflation
15	29	1½	Dilatation; insufflation
16	30	5	Dilatation; insufflation; ventrosuspension

These figures are of hospital cases, the majority of whom had no medical treatment, and in none of the cases was the husband's semen tested as it should have been.