THREE COMMENTS ON THE PREVENTION OF STERILITY

BY

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The falling birth rate is giving rise to serious concern, and many committees and societies are studying its causes. Sterility is of course one important cause. Special sterility clinics have been formed for the purpose of examining and treating sterile couples, but those seeking advice are established cases of sterility, only some of which can be cured. Most investigations dealing with sterility have been concerned with its causes and treatment, but my object is to indicate the importance of its prevention. Three conditions which may lead to sterility are here discussed—namely, hypoplasia of the uterus, gonorrhoea, and chronic constipation.

Hypoplasia of the Uterus

There are two types of hypoplastic uterus. In the first of these, in which the foetal form is maintained, the cervix is longer than the fundus, the uterus is acutely ante- or retroflexed, the os is pin-point, and the tubes are usually tortuous. Owing to the persistence of a foetal condition this may be called *primary hypoplasia*, and it is due to insufficient stimulus of the gonadotrophic and ovarian hormones. Hypofunction of the thyroid may also be a causative factor. In the second type the uterus presents the adult differentiation but is smaller than normal (*secondary hypoplasia*). It develops only in adult life following amenorrhoea, severe illness, or prolonged feeding of a baby when the mother is not in good health. It is an atrophic condition of the uterus, and its main symptom is sterility.

The chief sign of primary hypoplasia is disorder of menstruation. The menses usually begin regularly but become infrequent and scanty, and finally cease. Some patients may have scanty periods at one time and profuse at another. Dysmenorrhoea is also very common in hypoplasia. Sterility usually follows, and is to be attributed to causes such as insufficiently developed endometrium or anovulatory cycles, ectopic pregnancy, or abortion.

In the adult woman primary hypoplasia is rarely curable. It is important, therefore, that the condition should be recognized in time, and proper measures taken to correct the faulty development. Any abnormalities of menstruation at puberty and during adolescence should receive serious attention, since they may be danger signals showing that development is not progressing normally (Kurczok, 1937). Every girl who has not established a regular, normal, and relatively painless menstrual habit before the age of 15 needs inquiry into her general health and endocrine condition. The secondary form of hypoplasia might be prevented by adequate treatment of amenorrhoea and removal of the causes leading to the atrophy of the uterus.

At the present time, when thousands of girls still in their teens are engaged in war work, special attention should be given to these questions. Medical officers should be trained to recognize the early symptoms of endocrine disorders. The influence of every kind of war work on young girls should be studied. The experience of the last war showed what harmful effects improper feeding might have on young people. Spaeth (1917) and Vaerting (1918) have observed atrophy of the internal genital organs in women who, not properly nourished, were exposed to severe factory conditions. An adequate quantity of protein and vitamins is most important.

Gonorrhoea

It is well known that sterility may follow gonorrhoea, but since the discovery of the sulphonamide group of drugs the treatment of the latter has been revolutionized. Nowadays acute gonorrhoea can often be cured in a few weeks, but this advantage may be offset by the danger of overlooking slight inflammation of the Fallopian tubes, a lesion which may show

no acute symptoms but may be the cause of later sterility if neglected.

The first case I observed was that of a young woman of 29 who contracted acute gonorrhoea. She underwent a course of treatment with sulphapyridine, and became negative to tests within three weeks. She was kept under observation for another two months, after which she married. Three months later she returned seeking advice because no baby was yet on the way. Examination by tubal insufflation revealed blockage of both Fallopian tubes. There was no sign of inflammation, so two weeks later I carried out another insufflation, during which the pressure, which first rose to 200 mm., suddenly dropped to 110. This suggested that the tubes had become patent, evidence for which was also provided by the fact that the patient complained of shoulder pains. Three weeks later she became pregnant. This is one of several cases in which I have found blockage of the tubes three to six months after acute gonorrhoea. It looks as if the gonococci, having lost their virulence owing to the chemical treatment, may cause only a slight inflammation of the tubes, which heal up in such a way that the walls adhere together slightly without being blocked. Under those conditions insufflation, performed in time, may prevent definite blockage and consequent sterility. King (1939) expressed the view that the sulphonamide group of drugs are not directly lethal to the organisms, but modify their metabolism so that the body defences are enabled to get the upper hand. Similar inflammatory reactions are observed in the prostatic gland after chemotherapeutic treatment (Lloyd, 1939; R. Lees, 1939). I would therefore suggest that no woman with gonorrhoea should be declared cured until the tubes have been examined. If they should be closed within three to six months after apparent cure then repeated tubal insufflation should be performed. The first insufflation should not be made before the third month and not later than the sixth month after the last negative specimen. Before performing the insufflation the following precautions should be taken: (1) the cervical secretions must have been free from gonococci for at least three months; (2) the blood sedimentation rate must be normal; (3) there should be no detectable sign of inflammation of the tubes; (4) there should be no focal or general reaction after the provocative treatment with gonococcal vaccine.

Constipation

After a special study (Schleyer, 1937, 1938) of the inter-relationship between the pelvic colon and rectum and the female genital organs I reached the conclusion that inflammation of the rectum and pelvic colon may spread to the pelvic organs, leading to salpingitis and salpingo-oophoritis. One of the most common causes of proctitis and sigmoiditis is chronic constipation. Habitual disregard of the call to defaecation results in blunting of the sensation for defaecation and to accumulation of faecal masses in the rectum and sigmoid. This stagnation leads to damage of the mucous membrane and dilatation of the lower bowel, so that intestinal bacteria may invade the tissues and cause inflammation of the intestine. The anatomical situation of the lower intestine makes it possible for this inflammation to spread to neighbouring organs and thus cause salpingitis. Salpingitis often ends in sterility. Prevention of constipation and proper treatment of procto-sigmoiditis may thus be important factors in the prevention of sterility.

Summary

Sterility is an important cause of the falling birth rate. Once established it is difficult to cure, but prevention is sometimes possible. Three conditions are described which may lead to sterility—hypoplasia, acute gonorrhoea, and chronic constipation. Timely treatment of each of these might lessen the danger of subsequent sterility.

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