Vasectomy in general practice

A report on 100 consecutive cases

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> No man is an island entire of itself; every man is a piece of the continent, a part of the main; . . . any man's death diminishes me, because I am involved in mankind; and therefore never send to know for whom the bell tolls; it tolls for thee.
>
> John Donne (1571–1631)

CONTRACEPTION is a profoundly important subject for the individual and for society. Birth control is becoming not only desired by individuals but urgently required by society. Positive Government action is required (*British Medical Journal*, 1972), but the family doctor cannot opt out of a personal responsibility; he is concerned with the quality of life of his patients, and this depends on the health of society of which he is a member. Family doctors should be more deeply involved in family planning in general, and in particular provide means for family completion.

The problem

Social

The social problem is one of overpopulation. There is a tendency to consider the problem of overpopulation to be simply one for the underdeveloped nations.

However, the population density in England and Wales is only exceeded by that of Formosa and Bangladesh, and official projections by the Government Actuary show that if the present average family size of 2·4 continues, there will be 15,000,000 more people in this country in 40 years' time, which is a population-equivalent of more than 50 cities the size of Newcastle. MacQueen (1972) has shown that as the expanding underdeveloped countries increasingly need their food for their own populations, Britain must become more and more self-supporting, but that even given an efficient agricultural, horticultural and fishing policy, and also an effective disease-preventing service, we could feed only 30 to 40 millions. Now that death control has been improved, birth control must also be encouraged or if necessary enforced. The quotation from John Donne would be equally true if it read 'any man's *birth* diminishes me'.

Personal

The personal problem is one of family happiness. Ann Cartwright (1970) has found in a representative sample of families, that one third of all pregnancies are unintended.

While it is well-known that by no means all unwanted conceptions result in unwanted babies, probably nearly all unwanted babies were unintended conceptions, and the safest way to ensure that 'every child is a wanted child' is to add the words 'at the time of conception'. MacQueen considers that a substantial proportion of Britain's 60,000 divorces annually are in cases of ante-nuptial conception followed by 'shot-gun' weddings, and points out that one birth in 12 is illegitimate.

Moreover, higher maternal mortality and morbidity rates, as well as higher infant death rates, are associated with illegitimate births; he also reminds us of the consequences of impaired emotional health in children brought up without loving parents.

It is probably true to say that the most satisfactory family unit is one where the family consists of the number of children that the parents desired, conceived at the times they planned.

Family–doctor's role

Although there is both a global and a national problem of overpopulation, the family doctor's first concern is with the health and happiness of individual couples. In general, however, the wishes of the couple in the short term, and the needs of society in the slightly longer term, coincide through family limitation.

In general practice there are three common areas for contraceptive advice and therapy. These concern pregnancies conceived before marriage, pregnancies conceived too frequently within marriage, and pregnancies conceived too late in marriage.

(1) *Pregnancy before marriage*

Pregnancy conceived accidentally before marriage is probably largely a failure of education in sex and contraception. Possibly the only thorough method of sex education is at school. This should deal with the physiological and emotional facets, and must include contraceptive advice.

Thus, the family doctor has to be prepared to deal with the demand created by education in contraceptive techniques. Those who have moral qualms about giving contraceptive advice to unmarried girls should bear in mind that responsibility is a moral virtue, and that the girl who takes adequate steps to prevent unwanted pregnancy is acting more responsibly than the girl who takes chances; and that the couple who avoid intercourse only because of fear of pregnancy can hardly be held to have a very high moral code. If they are freed from the fear of unwanted pregnancy, they can decide their own course of action on more sincere moral grounds. In this group, the method most often advised is oral contraception.

Cartwright (1970) found that in her sample of general practitioners 95 per cent at sometime prescribed the 'pill'.

(2) *The unplanned baby in marriage*

The doctor providing maternity medical services must bear some responsibility for pregnancies conceived too frequently within marriage. The primigravid woman, as soon as she applies to her doctor for maternity medical services, is thereafter a captive target for contraceptive advice, and any pregnancy which follows, not wanted at the time of its conception, is to some degree a failure on the part of the doctor.

Successful contraception in this category suffers somewhat by being fragmented between various authorities: general practice, family planning clinics, hospital postnatal and other clinics. It can be argued that family planning should be centred firmly in general practice, and that it should be the responsibility of the general-practitioner team.

In this group, the two methods most commonly employed are oral contraception and the IUCD. Cartwright (1970) found that in her survey, ten per cent of general practitioners on occasion fitted an intra-uterine contraceptive device.

(3) *The late baby*

The third group of contraceptive problems consists of those pregnancies conceived late in marriage; it includes those conceived at relatively too advanced an age for acceptable maternal and foetal risk, and also those conceived after the parents have achieved what they consider an acceptable size of family, whatever the age of the parents. It forms a distinct group because it represents a failure to provide means of 'family completion'.

Tubal ligation in the female will always remain a hospital procedure, but vasectomy

is an easily learned technique, well within the competence of any interested family doctor. It is probably in this field that the general practitioner can make a weighty new contribution.

Selection of a contraceptive method

In my own practice it has been the custom for many years at postnatal examinations, to ask specifically if advice on contraception is required. Often the question has also arisen in the antenatal period.

When a vasectomy clinic was introduced it was usual to talk briefly about the three methods: oral contraception, the IUCD, and sterilization, with a simple statement of the guide lines to be used in deciding on a particular method. Thus, at the beginning, men who requested vasectomy did so as the result of a suggestion from their wives; later, however, more men asked for advice independently, having learned of the service available through talking with friends and workmates.

Contraceptive methods recommended

Advice on the method of contraception for a couple is made along these lines:

(a) For a newly married couple or a pre-nuptial couple who wish to defer pregnancy for up to a few years, oral contraception is recommended in the absence of contra-indications.

If contra-indications to the 'pill' exist, then either the condom or the vaginal diaphragm is advised—the consequences of failure being least serious in this category—unless the woman strongly wishes to have an IUCD fitted, despite having had the disadvantages of this method in the nulliparous patient explained to her.

(b) Oral contraception is also advised for the couple who already have a child and wish to space their children by two or three years, unless this is for any reason unsuitable, when an IUCD is recommended. If the IUCD is also contra-indicated, then again the less reliable older methods are advised until the desired family size is achieved.

(c) Couples who consider that they have completed their family have the three methods open to them. Oral contraception or the IUCD could still be the answer to their problem, at least for a time and especially in younger women. However, even in the absence of specific contra-indications to these methods, vasectomy is offered as an attractive alternative which is both reliable and virtually free from side-effects.

The contra-indications to oral contraception and to the use of the IUCD are well documented, but it is worth mentioning here that in considering contra-indications to oral contraception the woman's personal attitude is important: if she says she is not happy to take the 'pill' then this is a legitimate contra-indication. What she usually means is that she is afraid of dying from thrombosis, and statistical reassurances do not always remove this fear.

If such a patient is persuaded to try the 'pill', she will almost certainly find she is unable to tolerate the side-effects. In any case, if she is to be worried, it is probably better for her to worry about the risk of pregnancy than about the risk of sudden death. Often it is the husband who does not want his wife to take the 'pill', and again this attitude must be respected.

Vasectomy in general practice

Discussion with patients requesting vasectomy

A couple who ask for vasectomy are both interviewed, preferably together, and are given a brief explanation of what the operation entails. They are encouraged to ask questions. They are assured in particular that there will be no change in the man's sex life in any way, or in his general health. They are told that they must look upon the operation as irreversible; no compromise is allowed with the possibility of reversing the operation

later, because of the technical difficulties of the operation, and the uncertainty of success even in the best series reported (Hanley, 1968; Phadke and Phadke, 1967).

The doctor must assure himself that neither party is persuading the other into the decision, and also that the operation is not being requested in order to help support a marriage which is already failing. I have found that the aims of the interview have been achieved without difficulty because the couples are patients of the practice; their background—medical, economic, social and cultural—is known; the subject may also have been discussed with the couple by a referring partner.

A consent form is given for the couple to complete when they have made a final decision. The form follows closely that of the Simon Population Trust, as approved by the Medical Defence Union, to the effect that both husband and wife understand what is involved, understand that the operation is irreversible and are agreed in requesting the operation; the form also reminds them that two negative sperm tests, at intervals of at least four weeks, are required before they can abandon other methods of contraception (The Crediton Project, 1972; Simon Population Trust, 1969).

While it must be explained to patients that circumstances can change, that accidents can happen to children, that the wife may die and the husband may wish to re-marry, it is unreasonable to over-stress these rather remote possibilities. Special care is required in advising a couple during the wife's pregnancy because of the uncertainty of the outcome of the pregnancy.

The interests of the patient are paramount, and the doctor must never be over-zealous in encouraging vasectomy because of his personal attitudes such as a conviction about the dangers of over-population. A financial incentive to promote the operation has been countered in this practice by providing the service free of charge to registered patients. The service is considered to be part of the general medical services we offer.

Age factor

In the discussion on selection of patients no mention is made of age. There is seldom any difficulty in accepting a man for vasectomy when he and his wife are over 30 and have two or more children.

Younger patients require especially careful handling, though age is not the most important factor. At the other end of the age scale, it is important to remember that the distress caused by an unplanned pregnancy increases towards the end of the child-bearing period, and vasectomy is sometimes justified then.

In selecting patients for vasectomy, I feel that the doctor's job is to place the facts as fairly as he can before the patients and then to abide by their decision, rather than to take an arbitrary stand on age or parity.

Methods

Operative technique

The technique of operation has followed broadly the lines laid down in previous publications (Blandy, 1971). Three to five ml of one per cent lignocaine with one part in 200,000 adrenaline is injected superficially into the upper antero-lateral aspect of the scrotum on each side. Without withdrawing the needle, the vas is identified from the other constituents of the cord by palpation, and is manoeuvred so that it is lying just under the area of anaesthetised skin; a little lignocaine is injected alongside it, and the needle is withdrawn.

The vas is maintained in a constant position between a finger and thumb, and an incision about half an inch long is made in the line of the vas. The vas together with its coverings is exposed. It is encircled with an Allis's tissue forceps and delivered to the surface of the incision and carefully stripped of its coverings, taking particular care not to

damage the artery; a loop of the vas is delivered, drawing on the upper portion rather than on the lower, so as not to deliver the lower convoluted portion of the vas, together with its more vascular coverings.

Half to one inch of the vas is excised, and the ends are crushed and ligated with chromic catgut. In the later cases in this series the ends were folded back on themselves and ligated in this position (Hanley, 1968), and the resected portions were sent for histological confirmation.

Haemostasis is controlled by fine catgut ligatures if necessary, but this was not often required in this series. A single braided silk suture is inserted into the skin incision. A gauze and wool dressing is applied and is maintained in position with swimming trunks or close-fitting underpants. The National Health Service sterile dressing packs have been found very useful. Working single-handed the whole operation can be done in half an hour.

Follow-up

The patient is advised to take some simple analgesic if he has any local or pelvic discomfort when the effect of the lignocaine wears off. He is advised that he may take a bath the following day.

The sutures are removed after about five days. The man is told that he may have intercourse as soon as he wishes, though with contraceptive precautions, and that it is, in fact, necessary for him to do so, to flush out sperm from the spermatic vesicles.

He is asked to return with a semen sample after not less than four weeks, and again not less than four weeks later. The specimen should be examined within about two hours if possible, and should be brought to the surgery in the trouser pocket to maintain motility in any sperm which may be present. A drop of liquefied semen is examined microscopically under a cover-slip.

Results

In this series of 100 patients, compiled during 12 months, the average age of the husband was 34 years with a range of 26–47 years, and of the wife 31 years with a range of 23–44 years. The average size of the family was 2·4, with a range of one to six children.

Complications

Postoperative tenderness has been minimal. Three men have complained of hypogastric discomfort and some have mentioned a bruised feeling in the testicles for two or three days, both satisfactorily controlled by aspirin. None had troublesome subcutaneous bleeding.

Time off work

Most men have been able to continue their work without interruption. All patients are offered time off work if they wish, but very few have taken it.

A miner, a blacksmith, a lorry driver, and a school physical education teacher, are among those who were able to carry on with their work without interruption. Others chose to have the operation performed during their annual holiday, or while they were already off work with some minor traumatic condition. The average time lost by those who did not avail themselves of such special situations was less than two days.

Vasectomy was performed on Mondays, because the treatment room was free from other uses only on that day; it is now possible to perform the operation on Fridays, and the time lost from work has been even less.

In the series, there have been no positive semen specimens, either at four or eight weeks.

Psychological effects

In the short-term, psychological benefits have been obvious. Husbands have without exception expressed their satisfaction at having undergone the operation, and those wives who have been questioned have agreed. It has been surprising how many men have said at the time of the second semen test, that they have never felt better in their lives, presumably a reflection of relief from anxiety. It is too early to assess long-term psychological effects but there is no reason to think that they will differ from those reported in other series (Simon Population Trust, 1969).

Discussion

Many more people today are aware of the need for population control as part of a national and a global problem and most couples undertake some form of contraception to space their families. A secondary trend within family planning is a desire for a means of family completion. Vasectomy meets this need satisfactorily.

This series of vasectomies is presented to show that vasectomy is a feasible operation in general practice. In this group practice, it is made possible by the co-operation of members of the group, allowing one member of the practice to run a vasectomy clinic as part of the normal work of the practice, in normal practice time.

This is a situation which could be repeated more and more with present growth in group practice, with increased space, equipment and staff (Irvine and Jeffreys, 1971). At present, an average of about two vasectomies per week are performed from a practice population of about 13,000. In the same year only about 2,000 vasectomy operations were carried out in hospitals throughout the country (Summerskill, 1972). This suggests that it is probably still true that "interest in male sterilization in the community is considerable, and that the demand for the operation far outstrips the services available" (Jackson, 1970).

The facilities offered by our clinic have obviously been appreciated. The patients involved have been shown to be a representative town population, and have shown a responsible attitude towards their own family circumstances; quite a few also expressed a feeling of obligation to society to limit their families. No frivolous requests have been received.

Vasectomy as a means of family completion has been accepted much more generally in recent years, following publicity in the press and on television, and patients have stated that lack of knowledge of facilities available has been the main factor holding them back.

The ease with which vasectomy can be arranged within the practice has been appreciated; several patients have said that they would have hesitated had they had to be involved with outpatient appointments, waiting lists, and third parties. They appreciate being spared the embarrassment of having to involve anyone else in the arrangements for vasectomy, and are grateful for having it performed by a doctor they know, on the doctor's own premises, and without having to be on a waiting list for more than about a week.

Relation with other specialties

It is important to realise that the operation of vasectomy does not need to be limited to surgeons, or to be performed in hospital, but that it is indeed a simple general practice procedure. This service could be considerably increased if surgeons already providing a vasectomy service in hospitals would be willing to train general practitioners in their area to perform the operation, thereby at the same time reducing some enormous waiting lists. If widely adopted, this procedure could have a significant effect on population trends, and could increase the happiness of countless couples, which is our main concern.

Looking only a little further ahead, with the advent of prostaglandins for termination

of pregnancy the possibility of further involvement of the family doctor in what has hitherto been a hospital procedure becomes a possibility. There may be some intra-professional opposition to the use of prostaglandins in general practice for this purpose, but it is a position obstetricians may find difficult to uphold.

A plea was made in the House of Commons recently (Short, 1972) for all contraceptive measures to be included in medical training; immediate progress could be made by adding training in comprehensive family planning, including the performance of vasectomy and the use of prostaglandins in the termination of pregnancy, to the syllabus for vocational training in general practice.

There is no money for the doctor in providing a vasectomy service, but for those who care about the happiness of the married couples in their practice this is a worthwhile exercise; for those who are also convinced conservationists, it has a double appeal.

Addendum

The demand for vasectomy in this practice has since increased as the service has become more widely known.

Although it was not intended to be anything more than a service to our patients, this project can be construed, in retrospect, as a pilot survey of potential demand for vasectomy, when freed from restrictions of cost, embarrassment and waiting lists.

Projected throughout the country, the demand for vasectomy found here suggests a potential demand for vasectomy last year for *at least* half a million; in fact, about two thousand were performed free of charge, and possibly more were done privately.

This suggests that substantial waiting lists for vasectomy will remain until family doctors play an active part in reducing them. The Vasectomy Advancement Society of Great Britain exists to promote vasectomy as part of the family doctor service, and plans training sessions for interested doctors; it is also pledged to the popularization of vasectomy as a normal and generally accepted method of contraception (Altman, 1972).

The Department of Health could encourage vasectomy by some financial reward. At present there is an actual financial disincentive to the doctor, in that successful population control takes time, reduces his income from maternity medical services, and slows down the growth of his practice.

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