THERAPEUTIC ABORTION AND STERILIZATION

By T.N.A. Jeffcoate, M.D., F.R.C.S.E., F.R.C.O.G.

(From the Department of Obstetrics & Gynaecology, University of Liverpool).

Therapeutic abortion, and to a lesser extent sterilization, are popular if stormy subjects for discussion. They are stormy because they encroach on religious, ethical and personal convictions. It is, therefore, difficult if not impossible for anyone to consider them with detachment.

The problem is more acute in the case of therapeutic abortion because the destruction of a living embryo offends something fundamental in human nature, and it is the entry of individual personal feelings, prejudices and ethical standards which largely accounts for wide variations in the reported frequency of therapeutic abortion. Other important factors are the educational status and financial prosperity of the community from which cases are selected. In New York City, for example, there are, in proportion to live births, 5 times as many therapeutic abortions in private hospitals as in Municipal hospitals (Gebhard & others, 1959). According to the literature, reviewed by Anderson (1957) and Gebhard and others (1959) the incidence of therapeutic abortion in hospitals in Great Britain and the U.S.A. varies from 1:35 to 1:16,750 of all births.

The strong feeling, if not prejudice, of ethically minded members of the medical profession against induction of abortion may to some extent be conditioned by our upbringing and by the laws of the lands in which we work. The code of conduct of the medical profession in English speaking, if not other countries, still largely follows that laid down in the Hippocratic Oath. This includes the promise "I will not give a woman a pessary to cause abortion". The firm adherence to Hippocratic principles is, however, a relatively recent feature of medicine; it seems to have developed as the medical profession acquired a dignity and prestige amongst the community.

Out-look on induction of abortion has varied through the ages. According to Arkle (1957) early civilizations condemned interference with a pregnancy but centuries later, when Hippocrates was taking one view, Aristotle was teaching "If in marriage couples have children in excess, then shall abortion be procured before life and sensation have commenced; what may or may not be lawfully done in matters of this kind depends on the question of life and sensation". The Romans and even the ancient Hebrews allowed induction of abortion provided the wife and husband agreed, and provided that the woman was not harmed. The views of Aristotle and those of the Christian Church arose, it is said (Arkle, 1957), because of a mistranslation of the original Hebrew version of Exodus (Chapter XXI. v. 22). The laws of European countries followed those of the Church and for centuries pronounced against abortion unless it was carried out before the foetus was animate. This principle obtained in England even as late as the days of the Napoleonic wars. During the 18th and 19th centuries, however, the medical profession in Europe increasingly pointed out that there was no special time of animation during foetal development, and this more accurate scientific approach ultimately led to various European countries enacting laws against the induction of abortion at any time in pregnancy.

The attitude to abortion of various societies and races has, in the past, also been governed by the needs to increase the population to ensure military, religious or political dominance on the one hand, and by shortage of food and fear of starvation on the other. Indeed, the whole history of this complicated and difficult subject suggests wide fluctuations in outlook according to the social and economic needs of a community. The same needs account in part for different view points to-day.

The present strict ethical approach, which is characteristic of Britain today, is bound up not only with the maintenance of the dignity of the profession but also with the Hippocratic insistence that the physician's duty is to the individual patient and not the community. It is a fundamental precept of modern medicine that the interests of the patient take precedence over all other considerations. It is, incidentally, a principle which can be threatened by all State control of medical services. When the State employs and pays the doctor, who comes first — the State or the individual patient? This danger has so far been avoided in the State Service in Great Britain but it is one which has constantly to be guarded against.

INDICATIONS FOR THERAPEUTIC ABORTION

In Great Britain (and most English speaking countries have similar laws and outlook) the induction of abortion is governed in law by the Offences against the Person Act of 1861 and by its subsequent interpretation in the Courts. As a result of various rulings it can now be concluded that it may not be lawful to interrupt a pregnancy which would otherwise, in the opinion of the medical attendant, constitute a threat to the life of the woman or which would make her a "physical or mental wreck." This opinion must be honest although not necessarily correct. To ensure both honesty and correctness as far as possible it is usual to have at least two independent opinions in favour of the procedure. The legal situation is such that it is not positively lawful ever to induce abortion but it may not be unlawful to do so provided, in any particular case, it can be medically justified in the interests of the life and health of the mother. No disease can therefore be said always to indicate a need for abortion. The rightness of the operation must be judged for each individual patient and the reasons must be so strong that, if necessary, they will satisfy a Court of Law.

The lack of definition of the place for therapeutic abortion has advantages rather than disadvantages. The law is so strict that it controls criminal abortion reasonably well and yet it is so flexible that no woman is deprived of therapeutic abortion if the medical grounds are good, and no doctor need fear the law if his assessment of the case is conscientious and honest and is supported by a colleague of repute. Moreover, the absence of precise definition means that medical indications can change with the advance of knowledge.

It is remarkable, although not surprising, how quickly the medical indications for therapeutic abortion alter. As soon as a disease becomes amenable to successful treatment it tends to cease to be a reason for terminating pregnancy. Obstetric indications such as a past history of difficult labour and diseases such as hyperemeses, pyelitis and chorea gravidarum have virtually disappeared from the list during the last 25 years. Previously, in Great Britain, hyperemesis accounted for 15 per cent of therapeutic abortions. Certain general diseases such as tuberculosis, which may be associated with pregnancy, can now be treated by other means and no longer justify induction of abortion. From the personal experience of my own unit it is reckoned (Jeffcoate, 1960) that not more than 1 in 1000 pregnancies now need to be terminated on medical grounds. The main indications at the present time must vary with the type of community under consideration and with the type of disease to which the community is exposed. In our circumstances the leading indications now are:— heart disease; chronic hypertension and allied conditions; renal incompetence; a previous history of cancer of the breast; pulmonary incompetence; psychosis and neurosis; and potential foetal abnormality. Of these it is proposed to discuss only the last three.

1. Pulmonary Incompetence

Until recently, pulmonary insufficiency was barely recognised as an indication for therapeutic abortion. The advent of radical lung surgery, however, has introduced a new problem for the obstetrician. Most women can tolerate pregnancy despite removal of one lung (Williams, 1957) but, if they have less than the equivalent of one lung, the further embarrassment of respiration caused by late pregnancy and labour can be fatal. They die from myocardial as much as respiratory failure. This type of problem is seen not only as a result of surgery but as a result of extensive bilateral pulmonary disease. It also arises in cases of severe kypho-scoliosis affecting the mid-thoracic spine (Dewhurst, 1953). Within the area in which I practice, 3 women have died from pulmonary insufficiency in the last few years — two from previous pneumonectomy and one because of kypho-scoliosis. Others have come very near to death.

2. Psychiatric Indications

Psychological indications cover a wide field, so wide that they are easily abused. They range from frank psychoses induced by pregnancy to mere emotional distress at the idea of having a child which has been conceived under unfavourable circumstances. There is a wide divergence of opinion amongst psychologists as to the value of therapeutic abortion, and this explains why psychiatric indications vary from 0 to 40 per cent of indications in different clinics. As has been noted elsewhere (Jeffcoate, 1960) such evidence as is available suggests that few psychiatric disorders are benefited by therapeutic abortion, and this applies even to those psychoses which appear to be precipitated by pregnancy. In view of the doubts in the minds

of psychiatrists, and since it is so easy to interpret a patient's desire to get rid of pregnancy as a neurosis, it is not surprising that most gynaecologists are reluctant to induce abortion on psychiatric grounds. It may be that they are at present too conservative in this respect, but this is a natural reaction to what would appear to be a ready source of abuse of the operation.

3. Potential foetal abnormality

According to English law there is no place for therapeutic abortion in the interests of the foetus. When the operation is performed because the history of a case suggests that the foetus carries high risk of being mentally or physically abnormal, it is only justified in law by showing that the worry over the prospect of having an abnormal child is adversely affecting the mother's health. Therapeutic abortion is therefore performed on what might be regarded as flimsy psychiatric grounds. The medical profession has nevertheless come to accept this in those cases where scientific knowledge suggests that the maternal anxiety has a strong basis in probability. Thus it may sometimes by justifiable to induce abortion when two or more previous offspring of a couple have shown mental abnormality, and when a woman who has contracted or been exposed to German measles within the first 3 months of her pregnancy. There may also be a place for the operation in certain cases of rhesus incompatibility where the husband is homozygous rhesus positive. But this does not mean that these circumstances always indicate therapeutic abortion. Each case must be judged on its merits. Take, for example, rubella which, if contracted by the mother during the first three months of pregnancy, offers the foetus an overall 20% risk of malformation. This risk is higher if the disease attacks during the first two months than in the third. Thus the young woman with two healthy children who contracts rubella at the sixth week of her third pregnancy, may well be advised to submit to therapeutic abortion. But what of the primigravida aged 35 years who conceives after 10 years infertility and who suffers from rubella at the tenth week of pregnancy? May it not be better in her case to risk the foetus being abnormal than for her to have no foetus at all?

EUGENIC, SOCIAL AND ECONOMIC INDICATIONS FOR ABORTION

According to English Law, and to medical ethics based on the Hippocratic tradition, induction of abortion for eugenic and socio-economic reasons is unjustifiable. Yet it must be recognised that these factors sometimes do play a secondary role in influencing a decision. As noted above, a high expectation of genetically determined mental or physical disability is, because of its psychological effect on the mother, sometimes accepted by the most conscientious and law-abiding doctor. Again, social and economic factors play a part in determining the adequate treatment of many systemic diseases. The primigravida with heart disease, who has a good home and a secure income, who has opportunity to take adequate rest and to receive proper medical supervision, can tolerate pregnancy well. On the other hand, another woman with a similar degree of heart disease, who cannot rest because of having three small children to manage unaided in an unsatisfactory home, might be in urgent need of therapeutic abortion.

Certain countries, such as Sweden, Denmark, Finland and Iceland have, within recent years, legalised abortion for eugenic, humanitarian and social indications alone. Moreover, the medical indications accepted in such countries tend to be vague and to include all-embracing diagnoses such as "presumptive debility" and "foreseen weakness". Contrary to what is often supposed, however, a woman in these countries cannot have her pregnancy terminated simply for the asking, and legalised abortion is not generally used merely to help unmarried girls out of their difficulty. There is still control and supervision by medical and social workers. When eugenic and humanitarian indications alone are involved the case is generally submitted for approval by a central specially constituted review committee. Legal abortions are only carried out by approved doctors and are notified to the State Health Authorities. Nevertheless, these laws do make induction of abortion easy and a diagnosis such as "foreseen weakness" can clearly cover all manner of situations. Lindahl (1959) recently reported 1188 cases of induced abortion performed in 6 clinics in Stockholm in 1952-53. In only 84 was the indication somatic disease. The great majority (772) of the operations were carried out for "weakness" or "foreseen weakness", while 303 were for "mental disease".

The number of abortions induced in Scandinavian countries represents approximately 5 per cent of pregnancies. In this connection it should be emphasized that one of the motives for legalising abortion was to put an end to the activities of criminal abortionists. In Sweden, for example, in 1930, it was reckoned that 10

a high proportion of cases. Indeed, in Denmark where this method is used extensively, the injection of paste is usually routinely followed by curettage.

When the indication for terminating pregnancy is a general systemic disease which is so serious as to countermand continuation of pregnancy, the operative risk must be high. Thus, if the material includes a significant number of patients suffering from cardiac, respiratory and renal decompensation, a primary mortality rate of less than 1.0 per cent can hardly be expected. In a personal series of 63 cases of therapeutic abortion reported recently (Jeffcoate, 1960) there were no deaths but one woman came near to dying from pulmonary embolism. Five patients in all became seriously ill and took several weeks to recover from the operation.

When abortion is induced on relatively healthy women, as it is when the operation is legalised for eugenic, social and humanitarian reasons, risk is still present. It is suggested that a high morbidity rate was one of the reasons why the Russian Government in 1935 banned abortion except for strictly medical reasons. It is difficult to obtain accurate statistics for past years but, before the availability of antibiotics and blood banks, mortality and morbidity rates must have been high. Even when facilities for controlling blood loss and infection became available, the hazards remained considerable. Thus primary mortality rates as high as 1.7 to 3.5 per 1000 for therapeutic abortion, and 3.5 to 5.5 per 1000 for combined therapeutic abortion and sterilization, were reported from Sweden (Sjovall, 1951; Westman 1955). In Denmark, the primary mortality for all cases was once 2 per 1000 (Oram, 1952). The risk is being reduced in these countries which have highly developed medical services and first class surgical conditions. Nevertheless, the latest figures from the best gynaecological clinics in Stockholm (Lindahl 1959), and from Denmark (Berthelsen and Ostergaad, 1959), show a primary mortality rate of 0.7 per 1000 — which is as high if not higher than the overall maternal mortality rate for England and Wales. In all the well documented series from Scandinavia it is also clear that, apart from fatalities, serious post-operative complications occur in 3 to 4 per cent cases, and morbidity rates approach 15 per cent.

As regards remote disability, modern experience suggests that induced abortion does not now carry such serious hazards as it did in the past. Subsequent sterility, for example, may occur in no more than 1 or 2 per cent cases. One series (Lindahl 1959) followed up for 1 to 5 years after operation reveals most interesting figures. The incidence of permanent tubal damage was assessed at 2.4 per cent. Uterine fistulae resulting from abdominal or vaginal hysterotomy were found in 4.1 per cent. One patient had a vesico-vaginal fistula. But, most interesting of all, was the discovery of 166 cases of cervical (and sometimes vaginal and vesical) endometriosis amongst 840 traced cases treated by vaginal hysterotomy. This represents an incidence of 19.8 per cent.

Apart from the somatic ill-effects of induced abortion, the psychological sequelae need to be considered. Women are so constituted that, even though not wishing to have another child, they generally regret losing one which is already developing in the uterus. If, as in the case of deliberately induced abortion, they themselves play a part in the decision to sacrifice the embryo, they are liable to have life-long regrets. When women are mentally unstable and when the indication for terminating pregnancy is more flimsy, as is likely when psychiatric and social factors enter the picture, their peace of mind may be permanently shattered. Pearce (1957) and Martin (1958), from a review of the literature, say that termination of pregnancy in such circumstances leaves 25 to 59 per cent women with remorse and feelings of guilt. In other circumstances the figure may not be so high but it is nevertheless significant. Gebhard and others (1959) found evidence of prolonged psychiatric trauma in 9 per cent of a sample of American women who had had abortion induced therapeutically or criminally. The incidence of reactions of this kind may depend on the accepted ethical viewpoint of any community. What happens in a country where women are brought up to regard abortion as wicked may be very different from that in a country where infanticide is an established practice.

In considering the risks of therapeutic abortion it is sometimes argued that they must also be weighed against events which might occur if abortion is refused. The woman distracted by an unwanted pregnancy may commit suicide or otherwise do herself harm. She may herself attempt abortion or resort to illicit practitioners. Thus, it is said that therapeutic abortion or legalised abortion must be compared with criminal abortion. Although there is no legal or ethical justification for terminating pregnancy merely to protect a woman from a criminal abortionist, there can be little question that ter-

mination of pregnancy, when conducted as a set operation by an expert working in the best conditions, is far safer than any procedure resorted to by an illicit practitioner working in septic secrecy. Nevertheless, it still has to be established that legalisation of abortion significantly lowers the number of illegal operations. In certain countries, notably Japan, unauthorised practitioners (and sometimes authorised) still undertake the operation illegally—usually for monetary gain.

FACILITIES FOR LEGALISED ABORTION

This leads to the observation that the risks of inducing abortion vary with the method employed and, allied to this, to the duration of pregnancy. Abdominal hysterotomy probably results in the lowest morbidity but it carries the highest mortality rate—mostly from embolism. The constant observation of the patient and the early institution of effective treatment for thrombosis and embolism are essential if the risk of this operation is to be kept low. All vaginal procedures, although less likely to be fatal, carry risks of injury and infection. Again, these risks can be reduced only by keeping the operation in the hands of experts working in the best conditions.

Those countries which have widened the indication for legalised abortion beyond the purely medical ones have had to provide for very large numbers of operations without charge to the patient. After induction of abortion no patient can safely be allowed home in less than 7 days (14 days in the case of abdominal operations) and this could put an enormous strain on hospital beds, on operating room staffs, and on the surgical teams concerned. Indeed, the legalisation of safe abortion could well be a very expensive procedure, expensive in money and in the time of experts.

THE PATIENT'S VIEWPOINT

No matter how strong is the indication for terminating pregnancy, the final decision rests with the patient and her husband. Even if abortion were legalised for eugenic and social reasons it would be unthinkable to force the operation on a patient unwilling for it. This could well mean that the uneducated and shiftless members of any community would refuse it, while those more ambitious to elevate their economical status would accept the opportunity to be rid of parental responsibility. From the eugenic standpoint this could have the worst possible effect on the community.

Even when there is a pressing medical need for the operation many women, often those without special religious scruples, refuse therapeutic abortion. They willingly accept any risk to satisfy maternal instinct. The multigravida can console herself that, by sacrificing one pregnancy, she is preserving her life and health for the better care of her children already born The primigravida, however, who consents to the destruction of her pregnancy may have no consolation other than a few years of life which, being childless, are to her not worth having. If there is a hope of children in the future, when her health has improved, she may agree. When there is no such hope, then her refusal to accept technical advice cannot be regarded as anything but wise and admirable.

STERILIZATION

In England and Wales the legal position in regard to sterilization of either the male or female is as ill defined as that in respect of induced abortion. If performed on a healthy individual for no clear medical reason it might well be interpreted by the Courts as an assault, even though it is carried out with permission of the person concerned. By common consent, however, the medical indications for sterilization are regarded as deserving a wider interpretation than those covering therapeutic abortion. This is because the destruction of a human individual is not involved. Thus, the fact that a woman has had 3 previous Caesarean sections is commonly accepted as an indication for tubal ligation, whereas it would not justify terminating pregnancy already established. Again, few would hesitate, if requested, to sterilize a woman who had already given birth to 2 or more children with a genetic taint. Now-a-days, in certain centres, and bearing in mind the increasing risks of childbearing with advancing age and parity, many women are being sterilized merely because of having already had 4 or 5 children. This, incidentally, relieves them of economic and domestic burdens as well as future obstetrical hazards.

What is more doubtful, legally, however, is whether it is justifiable to sterilize a healthy man because of his wife's disability. This may constitute an assault in Law. It is nevertheless often suggested, although rarely practised, that the husband rather than the wife should be sterilized because the operation involved is less dangerous. This raises the point that all sterilization procedures on the female involve major surgical interference with consequent risks to life and health. A mortality rate of not less

than 1 per 1000 is only to be expected for all tubal ligation procedures. Apart from the physical hazards, sterilization can also be followed by adverse psychological reactions and by marital disharmony. The very knowledge that pregnancy cannot result may consciously or subconsciously decrease libido and satisfaction in either husband or wife. Moreover, even though they do not wish to have more children, the partners of a marriage often do not like to be deprived of the right to change their minds.

A cautious approach to tubal ligation is therefore necessary in every case and it is essential that both wife and husband realise that the operation is generally irreversible. It is also well for them to realise that no sterilization operation, even hysterectomy, can be absolutely guaranteed to prevent pregnancy. Of all possible procedures, the one mostly employed—and for good reasons—is the removal of a portion of both Fallopian tubes. This can be done by either a vaginal or an abdominal approach but the former is slightly less reliable in that the tube may be misidentified. Each gynaecologist tends to have his own favourite technique for tubal ligation but the Pomeroy operation is now probably the most widely used. It is simple and relatively free from the risks of haemorrhage into the broad ligament which tends to occur when attempts are made to bury the cut ends of the tubes. Because of the increased vascularity of the tissues during pregnancy, this complication is especially common when sterilization is carried out at the time of Caesarean section or abdominal hysterotomy. The chance of a Pomeroy operation failing to the extent of the woman conceiving again is approximately 1 in 200 or 300 cases. So far as I am aware it has only happened once in my own operative experience.

In recent years it has become customary to advise sterilization in the puerperium following a vaginal delivery, whenever it appears unwise for the patient to conceive again. This has the advantages that there is no chance for the woman to change her mind on returning home, and no chance for her to conceive again before the operation can be arranged. It also means only one stay in hospital and one convalescence. Moreover, during the early puerperium only a small abdominal incision is required because the tubes are easily accessible. Nevertheless, there is reason to hesitate to carry out tubal ligation soon after labour in certain cases. If the indication is general ill-health, heart disease for example, then the woman is in the worst possible condition for surgery within a week of her delivery. It is also suggested, although statistically unproven, that tubal resection at term or in the early puerperium is more likely to be followed by recanalisation of the tube. Despite these arguments, puerperal sterilization has an important place in those cases where parity alone is the indication and where labour has not caused temporary deterioration in general health.

CONCLUSION

Sterilization does not present the thorny political, religious and ethical problems of therapeutic or legalised abortion. Nevertheless, it cannot be considered lightly because, although offering a means to secure happiness, health and economic betterment for many women, it can have ill effects. It involves surgery with its attendant hazards. It may also be followed by unpredictable psychological reactions. It is therefore difficult not to conclude that, as in the case of therapeutic abortion, it is wise to have a clear medical indication for the operation before advising it. In this context multiparity is an accepted medical indication.

And this brings us back to the Hippocratic Oath which is remarkable for its wisdom. Strict adherence to its principles is the foundation for the present high prestige and esteem which the medical profession enjoys. And one of the fundamental principles of this code of practice is its insistence that the doctor's prime concern is the welfare of the individual patient—"I will use treatment to help the sick, according to my ability and judgement, but never with a view to injury and wrong doing". It is this above all which explains the confidence and faith imposed by the patient in her doctor and this in turn, enables the medical profession to practise medicine scientifically and conscientiously. So great is the faith that the patient is generally prepared to accept that the doctor knows better than she what is in her interests. This applies even to induction of abortion and to sterilization. One of the present day dangers which encompass the medical profession is the pressure exerted to make it put the needs of the community before those of the individual. Sometimes, as in many branches of preventive medicine, there is no conflict between the two but, once the interest of an individual is sacrificed for what may appear to be the good of the community, the trust and respect which the profession enjoys will be lost. And that means the loss of the greatest privilege enjoyed by any member of our profession.

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