were performed on Indians[1]; and 74 of the 79 patients who had an intravenous pyelogram done for suspected stone were Indian, as were 26 of the 28 with unequivocal evidence of stone. Metabolic studies have recently been carried out in a group of 31 of these Indian stone formers.[2] The handling of calcium, uric acid, and amino-acids seems to be normal, and there is nothing to suggest any inborn or acquired tubular dysfunction.

The explanation may be a matter of diet. These Fijian Indian patients may be similar to those reported by Murphy,[3 4] in whom renal disease was attributed to the excessive use of Worcestershire sauce. His five patients had evidence of both glomerular and tubular damage, with an occasional finding of abnormal aminoaciduria and an impaired response to an ammonium chloride load. Some of his patients had stones, but one was referred to hospital for hypertension and another for renal insufficiency. Nevertheless, Worcestershire sauce contains ingredients widely eaten by Indians—garlic, black pepper, ginger, and cinnamon—and it has been suggested that the volatile oils from these may be nephrotoxic. The exact quantities of Worcestershire sauce consumed by Murphy's patients were not given in his papers, but the Fijian Indians have been estimated to eat the equivalent of a bottle of Worcestershire sauce every day in the form of curries, spices, and pickles. Though the "curry kidney" has yet to be proved as a pathological entity, the hypothesis might well be tested in other communities with a high incidence of renal stones. How common is stone, for instance, among the Asian population in Britain?

[1] Holmes, G, *Medical Journal of Australia*, 1971, **2**, 755.
[2] Johnson, J R, and Holmes, G, *Medical Journal of Australia*, 1976, **1**, 521.
[3] Murphy, K J, *Lancet*, 1967, **2**, 401.
[4] Murphy, K J, *Medical Journal of Australia*, 1971, **1**, 1119.

Abortion and maternal deaths

In England and Wales abortion remains the most common cause of death associated with pregnancy.[1] In the past these deaths mostly followed illegal or spontaneous abortion, but since the introduction of the Abortion Act 1967 deaths associated with spontaneous abortion have almost disappeared and those after illegal abortion have fallen steadily. To some extent this welcome improvement has been offset by a persistent rise in deaths associated with legal termination of pregnancy, and at present there are as many fatalities after legal as illegal abortion.[1]

It is disappointing that women should continue to hazard their lives by resorting to criminal or self-induced abortion, and the circumstances leading to these deaths merit close study. Of the 38 women who died after illegal abortion between 1970 and 1972, eighteen were immigrants from the New Commonwealth.[1] These women may not have known that they could have obtained legal abortion in Britain or how they should have gone about it. Others might have brought with them attitudes and practices that are common in their countries of origin. Whatever the reason these women are specially at risk. Another group seem determined at any cost to keep their pregnancies secret and purposely avoid contact with family doctor or gynaecologist, ill-advisedly resorting to self-induced or criminal abortion.

Deaths associated with legal abortion have risen steadily with the rising number of abortions performed since the Abortion Act. Tietze and Murstein[2 3] estimated that the mortality from legal abortions in England and Wales (including deaths associated with legal abortion but not attributed to it) during 1970-3 was 12·3 per 100 000 abortions. The comparable figure for the United States over the same period was 6·3. To a large extent this difference may be explained by the higher average age of women obtaining abortions in Britain, the longer average duration of pregnancy at which the abortions are performed here, and the higher proportion of abortions combined with surgical sterilisation. To what extent other factors such as the choice of procedure (curettage, suction, hysterotomy without sterilisation, utus paste, or intrauterine saline) are relevant cannot be determined from available data.

In the short term little can be done to influence the age at which women seek abortions, but much could be done to ensure that most abortions are performed in the first trimester. The primary need is for more accurate information about the reasons for the present delay in reaching a decision about whether to terminate the pregnancy. To what extent is the patient, the family doctor, or the gynaecologist (indeed the whole system of referral and consultation) responsible? These and other relevant questions can be answered only by well-planned prospective studies in large, representative communities. Once we have a better understanding of the sequence of events we should be able to make acceptable recommendations that would allow sufficient time for counselling without delaying a final decision beyond the twelfth week of pregnancy. Everyone concerned, including patients, should be well warned of the dangers of procrastination.

In England and Wales the proportion of legal abortions with concurrent sterilisation fell from 23% in 1968 to 10·8% in 1973.[2] The comparable figure for the United States ascertained by the Joint Program for the Study of Abortion[2 4] in 1970-1 was 3·7%. The mortality in England and Wales was nine times higher for abortions with concurrent sterilisation than for those without.[2] In some measure this high death rate is related to the fact that in almost two-thirds of all abortions with sterilisation either hysterotomy or hysterectomy was required. Again, women who are aborted and sterilised at the same time are older and their pregnancies further advanced, and these factors themselves contribute to a higher mortality. Where at all possible these surgical procedures should be avoided, for they add significantly to the risks of abortion.

These are general and important features of mortality associated with abortion. The recently published *Confidential Enquiries into Maternal Deaths (1970-1972)* identified avoidable factors in half the deaths from legal abortion during this period, and this form of detailed study of individual deaths is most helpful. Utus paste and laminaria tents are specially mentioned as the two methods of termination carrying the highest risk, and it is deplorable that the number of deaths attributed to the introduction of a paste into the uterus during legal abortion has risen from two during 1964-6 to seven during the three years covered by the last report.

Induced abortion will never be without some risk. Nevertheless, this may be kept to a minimum if the procedure is carried out in the first trimester under suitable conditions by an experienced operator using well-established techniques.

[1] Department of Health and Social Security, *Report on Confidential Enquiries into Maternal Deaths in England and Wales 1970-1972*. London, HMSO, 1975.
[2] *Induced Abortion: 1975 Factbook*. New York, Population Council, 1975.
[3] Tietze, C, 1976, personal communications.
[4] Tietze, C, and Lewit, S, *Studies in Family Planning*, 1972, **3**, 97.