is no evidence to support this. What Guedel reported was six deaths associated with a temperature rise after ether anaesthesia. There was nothing in his report to suggest that an inherited metabolic abnormality was present in any of the cases which he described. All except one were having abdominal operations and four cases occurred in the same hospital within a period of one month. No comments were made on the environmental temperatures or humidity, the presence or absence of sepsis, or the age or family history of the patients. All of these patients could equally well have died from postoperative heat stroke.²

There is no doubt, however, that malignant hyperpyrexia did occur before the 1960s, as in a local family in which there have been 10 deaths due to malignant hyperpyrexia the earliest fatality due to this cause was in 1921. Each of these 10 deaths was due to ether, and the interesting possibility arises that some of the cases of "ether convulsions" occurring in the past may have been due to malignant hyperpyrexia.—We are, etc.,

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¹ Guedel, A. E., *Inhalational Anaesthesia*, New York, Macmillan, 1937.

² Cutting, R. A., *American Journal of Surgery*, 1931, 13, 624.

patient to write her name and address. In these cases the patient will then be sent another appointment for 7-10 days later and a further prepaid reply envelope, and so on. Should the patient not know the date of her last period the referring doctor will give her the appointment request form with a prepaid envelope with instructions to post it to the x-ray department on the first day of her next period. Obviously if an examination is considered urgent, and the clinician marks the request form accordingly, no notice will be taken of a possible pregnancy.

We do not claim that this system will obviate any possibility of irradiating a young fetus, but we think that it will not interfere with the organization of a busy department, as a more complicated system would, and that most patients will understand it. We should welcome comments before launching a full-scale trial, and we would gladly send to anyone interested a copy of the explanatory letter to patients and a flow diagram of the system.—We are, etc.,

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Radiography of Potentially Pregnant Women

SIR,—Dr. L. A. Gillanders's letter (3 February, p. 291) following that from Drs. G. M. Ardran and F. H. Kemp (18 November, p. 422) prompts us to report a simple system we propose to operate (1) to avoid irradiation of a fetus within the first few weeks of conception, and (2) to spare the patients from needlessly preparing themselves for x-ray examination and from a fruitless journey to the x-ray department.

We shall assume that women taking an oral contraceptive or fitted with an intra-uterine contraceptive device are not pregnant and appointments for diagnostic radiography for them will be made in the normal manner. In all other women aged between 15 and 50 requiring examinations which entail irradiation of the pelvis the referring doctor will be asked to state the date of the patient's last menstrual period. If an appointment for the examination cannot be made within 10 days from the beginning of the last period—that is, before ovulation—an appointment will be made for the week after one calendar month from the first day of the last menstrual period. For example, if this were 16 March the appointment would be made for a day in the week after 16 April.

A letter will be given to patients with their appointment stating the need to avoid radiography in some women at certain times. It will also state that if by the day appointed for the x-ray examination the patient's menstrual period had not started within the past 10 days she should notify the department, and ask for another appointment by filling a tear-off slip and posting it in a prepaid envelope enclosed with the letter. The slip will simply state: "My period has not yet begun. Please send me another appointment," and there will be a space for the

Latent Morbidity after Abortion

SIR,—Legal abortion is neither totally safe, nor is it as dangerous as is sometimes made out. Your leading article (3 March, p. 506) provides a somewhat uncritical view of the evidence submitted by M. and A. Wynn to the Lane Committee.¹

In a subject as controversial as abortion it is unfortunate that you should have failed to point out some of the errors in the Wynns' paper. The publicity which it and your commentary received in the national press may have caused unnecessary distress to women who have had, or who are contemplating, legal abortion. The Wynn document contains the sentence: "During the six years following the liberalization of abortion in Japan, the number of births fell by 37%, while the infant death rate from congenital malformations increased by 43%." These statistics are taken from a paper by Matsunaga.² The original paper demonstrates that, as the Japanese restricted their fertility after the second world war, congenital defects "must have been reduced in Japan as a result of the decreasing frequencies of births of higher rank as well as those of both older and very young mothers" (my italics). Statistical evidence is put forward to support this conclusion and it is pointed out that the infant death rate from congenital malformations per 10,000 live births declined from 23.7 in 1950 to 19 in 1960. One of the statistical tables notes that the same rate was recorded as 14.7 in 1947 but the table itself has a footnote which says, "This figure seems to be an underestimate." Those who are familiar with the history of Japan will realize that the registration of congenital abnormalities was incomplete immediately after the war.

The Wynn document also deals with the

risk of premature delivery in women who have had previous induced abortions. It would have been useful to quote the available 1972 Hungarian literature.³ In an exceptionally careful study, a consistent relationship was shown between previous spontaneous and induced abortion and the probability of premature delivery and raised perinatal mortality. The relationship was greater in older than in younger women, was greater if the abortion prior to the delivery had taken place within one year, but was unaffected by socioeconomic status. A relationship between smoking and prematurity, which has been observed elsewhere, has also been confirmed in this study. The definition of variables affecting perinatal mortality is always welcome and the Hungarian data deserve to be widely known. The great majority of abortions in Hungary are done by dilatation and curettage under general anaesthesia. In my experience dilatation is usually rapid and up to 10 mm or more. It is notable that in an adjoining area of Yugoslavia where outpatient abortion under paracervical block has been used for over a decade there has been no alteration in the prematurity rate (see table). It seems likely that in the conscious woman the surgeon treats the cervix with the gentleness which it deserves. The use of the Karman catheter is becoming popular in many centres.⁴ With or without local anaesthesia, it would seem likely that this method does little insult to the cervix.

Number of Pregnancies Dealt with by the Department of Obstetrics and Gynaecology, Novi Sad, Yugoslavia. (Modified from Beric and Kupresanin.⁵)

Year	Deliveries	Legal Abortions	Ectopic Pregnancies	% Prematurity
1960	2,279	4,580	148	7.45
1962	2,406	4,754	140	8.34
1964	3,001	5,045	165	10.52
1966	3,282	4,572	166	8.36
1968	3,394	5,672	157	8.73
1970	3,813	6,445	121	7.12

The Wynn paper also quotes high rates of ectopic pregnancy following induced abortion. Careful case-control retrospective studies in Japan⁵ have failed to demonstrate a relationship between previous abortion and ectopic pregnancy (except in the case of interstitial ectopic pregnancy). In 222 ectopic pregnancies, 52.7% had a past history of induced abortion compared with 50.3% of the normal deliveries. No increase in ectopic pregnancies has been demonstrated in Yugoslavia.⁶

It is always useful to review the experience of other countries, especially in the case of abortion, as the British experience is relatively novel. However, a simplistic comparison of morbidity rates is no more than a confusing exercise, unless the criteria for recording events are closely defined. Mortality rates are an easier measure to analyse. Experience in Britain compares adversely with that in Eastern Europe, Japan, and New York. Among 82,800 legal abortions performed by vacuum aspiration in New York City in 1970-2 there was one death. There is now very powerful statistical evidence from New York City⁷ that the liberal abortion law which has been in force since 1970 has been associated with (a) a massive transfer of induced abortion from the illegal to the legal sector, (b) a welcome reduction in maternal mortality, and (c) a