Although all the relevant factors cannot be assessed it is possible that the differences in case fatality rates among staff in individual outbreaks reflect strain differences of the infecting agent.

Au antigen testing is the most valuable laboratory method for the detection of hepatitis in dialysis units, but liver function tests may provide useful support by showing infection in a small portion of patients in whose sera Au antigen cannot be detected readily and by indicating the presence of infection not associated with Au antigen.

The procedures adopted in 1970 were limited by the resources available for testing, especially the supply of antibody for use as a reagent. Blood for transfusion was not then screened at source and few dialysis units had isolation accommodation suitable for haemodialysis. Although the procedures were by no means comprehensive the results of the study in 1970 are encouraging. Au antigen was detected in specimens from each of six previously unaffected units. Four of the six units escaped outbreaks. It seems significant that in the two units in which outbreaks did follow the appearance of Au antigen it was found that the procedures of the prospective study had not been adequately observed. One of these units, in fact, inadvertently acted as a "control" by admitting an unscreened carrier patient. Secondary infection of other patients followed. Fortunately prompt initiation of isolation and intensive screening procedures limited this outbreak to three patients.

The rise from 1968 to 1969 in the incidence of hepatitis among patients and staff was halted in 1970. It seems likely that this was related to the measures of control and prevention initiated in July 1969 and January 1970 respectively.

Regular laboratory testing with sensitive methods combined with isolation of infected patients seems to be the most effective means available at present of controlling and preventing hepatitis in dialysis units. Some interval, however, must always exist between tests, and tests are not infallible. Units must therefore be considered at risk at all times and effective cross-infection precautions should be observed routinely.

Until effective immunization against hepatitis becomes available continued surveillance of dialysis units is essential and it should be extended to other associated groups—for example, surgical transplant teams. Present systems of screening should be improved in sensitivity and frequency. These measures should be supported by the screening of all blood for transfusion and the provision of adequate isolation facilities for the

dialysis of any patient found to be a carrier of Au antigen or showing any other evidence of hepatitis.

We are grateful to the dialysis unit staff who completed the records and dispatched the specimens. We thank Miss N. Morris and Mrs. J. Miller for helping with the co-ordination of the studies, Miss S. P. March and Mr. F. D. Hargreaves, who tested the specimens from most of the units, and Dr. Anne A. Field, who performed the electron microscopy.

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Contemporary Themes

Effects of Legal Abortion on Gynaecology

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Summary

The effect of the Abortion Act on gynaecological work in one provincial teaching hospital is that despite an increase in patient turnover of 45% the waiting list has

increased by 200%. It is suggested that the Act has had little effect on the birth rate or illegitimacy and that there may have been an increase in criminal abortion.

Introduction

When the Abortion Act 1967 was implemented in April 1968 it was expected that it would result in an increase in gynaecological work in the United Kingdom. It was hoped that this increase could be assimilated into existing services without embarrassment to routine gynaecology. Keith,¹ however, showed that in

United Bristol Hospitals

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many areas waiting lists for gynaecological operations had increased by over 100% in the 10 years preceding the Act and such information, which was available at the time, should have indicated that the Act could not be implemented without a serious effect on existing facilities.

We present here our experience in gynaecological unit within a provincial teaching hospital covering the period 1964-71 inclusive. Analysis has been made of the number and methods of legal abortions, the total workload of the department, and the inpatient waiting list, and an assessment is made of the effect on the population of Bristol in terms of criminal abortion, illegitimacy, and birth rate.

Whatever may be the moral implications of the liberalization of legal abortion we feel that on the credit side should be shown a reduction in birth rate, illegitimacy, and criminal abortion as well as the socioeconomic benefits to individual families, which are so difficult to evaluate. If these objectives are achieved the Act can be thought successful only if these advantages have been produced without (a) reduction in routine gynaecological work, (b) increased waiting lists, and (c) deterioration in patient care from overstraining existing staff and facilities.

Department and Staffing

The department consists of a 31-bed gynaecology unit in a provincial medical school. It is staffed by two part-time consultants and two registrars (all of whom also staff a 65-bed obstetric unit) and one preregistration house officer, who is fully employed in gynaecology. There has been no change in staffing structure over the past 20 years. Attached to the firm throughout the year we have four medical students who are expected to receive all their clinical instruction in gynaecology in four weeks.

Patients requesting legal abortion are seen in the ordinary gynaecology outpatient clinic and no extra time is allowed for their interview. All new patients are seen by one person (usually the consultant but in his absence the registrar). A limit of 24 new patients per session is made, as we think that this is the maximum number one person can see adequately and at the same time teach students. With this limit imposed there is an "urgent" outpatient waiting list of three to four weeks.

One of the problems associated with the high outpatient load is that we have to make quick, final decisions regarding requests for legal abortion, and it is unusual for us to refer the patients for interview with a social worker or for a psychiatric opinion. Section I (2) of the Act states that in considering the risk of the pregnancy to the physical or mental health of the woman or her children we should consider the "actual or reasonably foreseeable environment." We feel that the best person to make this assessment is the general practitioner. As a result we pay great respect to the opinion expressed in the referring letter.

Legal Abortions

The total number of legal abortions performed in the unit are enumerated in Table I. There had been a slight increase in the number of legal abortions up to 1967 in anticipation of the Act, but thereafter the increase was rapid, reaching a maximum of 414 in 1970 but with a slight fall to 373 in 1971. We would like to think that a plateau has been attained, but from national figures available and our impression so far in 1972 we doubt if this is so.

The methods of termination used are given in Table II. During the years 1964-6 inclusive only 37 abortions were performed, of which 61% were in the midtrimester and required hysterotomy, Utus paste, or laminaria tents. Vaginal termination by curettage was possible in only 39% of cases during that time. Since 1967 the proportion of pregnancies terminated by curettage or vacuum aspiration has steadily increased, and for the past two years 72% have been terminated by this method. Our

TABLE I.—Number of Surgical Operations Carried Out by Department, 1964-71 Inclusive

Year	Routine Surgical Operations			Emergency Evacuations	Legal Abortions	Total Evacuations	Total Throughput
	Major	Minor	Total				
1964	409	509	918	275	5	275	1,198
1965	386	527	913	278	10	278	1,201
1966	377	523	900	266	22	266	1,188
1967	387	585	972	262	61	265	1,298
1968	430	641	1,071	231	139	236	1,446
1969	442	607	1,049	239	272	252	1,573
1970	384	594	978	272	414	295	1,687
1971	400	563	963	361	373	403	1,739

TABLE II.—Number of Legal Abortions Performed 1964-71 and Methods Employed as a Percentage of the Total

Year	No. of Abortions	Vaginal Termination (%)	Utus Paste (%)	Hysterotomy and Hysterectomy (%)	Sterilization (%)	Laminaria Tents (%)
1964-6	37	39	19	33	33	9
1967	61	50	8	42	42	—
1968	139	65	12	23	22	—
1969	262	63	22	15	12	—
1970	414	72	19.5	8.5	8.5	—
1971	373	72	25	3	3	—

present experience that 72% of terminations are being carried out before 12 weeks' gestation is perhaps slightly better than 78% before 14 weeks quoted by Stallworthy *et al.*² but less creditable than the 82% first trimester abortions by Potts and Branch³ or the 100% described by Beric and Kupresanin.⁴ The main reasons for the 28% midtrimester terminations are delays—firstly, in the patient seeking advice; secondly, in the general practitioner making the decision to refer, and, finally, the increasing delay in obtaining outpatient appointments and hospital admission.

During the period under review the proportion of patients sterilized at the time of termination fell from 33% in 1964 to 3% in 1971. We feel that the decision to undertake sterilization on sociomedical grounds should not be made quickly, and we prefer to terminate the pregnancy and offer sterilization by the vaginal route or using the laparoscope three to six months after termination.

Effects on Other Work

The surgical work in terms of operations performed for the years 1964-7 inclusive has been examined to assess the effect of legal abortion on the functioning of the department and on the routine waiting list. Admissions not requiring operations and emergency operations (other than evacuations of incomplete abortions) have not been included since they are unlikely to have been influenced by the Abortion Act.

MAJOR OPERATIONS

Only routine operations have been included thus excluding terminations by hysterotomy or hysterectomy. Apart from a slight rise in 1968 and 1969 the total major surgical work by the department remained unchanged from 1964 to 1971 (Table I).

MINOR OPERATIONS

These include all non-emergency minor operations and exclude all abortions. The figures in Table I show that the maximum number of minor operations was reached in 1968 and 1969. There was a slight fall in subsequent years but the number of cases in 1971 was still above that for 1964.

Emergency Evacuations

Patients admitted as emergencies with inevitable or incomplete abortions are included in this group. The number remained fairly constant from 1964 to 1970 with an unexpected rise of about 30% in 1971 (Table I).

A strict rota for emergency work is maintained throughout the gynaecological departments in the Bristol hospitals. Our unit, in fact, covers 17 days out of every 56 on emergency duty for the city. Hence, our figures for emergency evacuations form a representative sample of the spontaneous and criminal abortions occurring within the area served by Bristol hospitals. It is reasonable to assume that the ratio of spontaneous abortions to live births is constant in any given community over a short period of time, and in Bristol both the total births (Fig. 1) and the birth rate (Fig. 2) are falling. From this one can predict that the number of spontaneous abortions in this population has also fallen. Since the number of emergency evacuations in this department has remained constant (ignoring the unexplained rise in 1971) it seems likely that there has been a rise in the number of criminal abortions in Bristol since the Abortion Act.

FIG. 1—Fall in total number of births in Bristol, 1964-71.

FIG. 2—Decline in live birth rate in Bristol, 1964-71 inclusive.

Total Evacuations

For completion we have included the figures for total evacuations for incomplete abortions, which include spontaneous abortions, those requiring re-evacuation after simple termination of pregnancy, and incomplete abortions induced with Utus paste (Table I).

Total Surgical Work Load

By adding together the routine major and minor cases, legal abortions, and total evacuations an assessment of the change in surgical work load can be made. This figure rose from 1,198 cases in 1964 to 1,739 in 1971, representing a numerical increase of 45%. Although many of these extra cases involved relatively minor surgical procedures the increase exerted a considerable strain on existing ward and operating theatre facilities. The increased work load was achieved only by modifying previous practices. We reduced the length of stay of all major cases from an average of 14 days in 1964 to eight days in 1971. More minor cases are now treated as day patients for whom we have undertaken an extra operating list. A point has now been reached where we cannot further expand our work load as the available beds are fully occupied, the medical and nursing staff are fully employed, and there is no remaining free theatre time.

Waiting List

The waiting list for inpatient treatment in the unit increased from 240 patients in 1964 to 708 in 1971, a rise of nearly 200% (Fig. 3). The Abortion Act cannot be held completely responsible for this since the increase in the waiting list began in 1965. The sudden rise in 1965-6 followed the introduction of a cytology service in the city which had the dual effect of finding symptomless gynaecological lesions, which were then referred for treatment, and of making the female population more aware of gynaecological symptoms. Another factor increasing the waiting list has been a more liberal attitude to sterilization on socioeconomic grounds over the past seven years, with a noticeable increase in the number of admissions for sterilization operations. Nevertheless, the changes in policy previously outlined resulting in the increased patient turnover would have completely abolished the waiting list had it not been for the number of legal abortions performed in the past four years. Our experience is therefore that in spite of an increased surgical turnover of 45% our waiting list continues to increase, a finding which contrasts with the report of Rawlings and Kahn,⁶ who were able to deal with the demand for legal abortion and reduce their waiting list by an increase in work of only 25%.

FIG. 3—Waiting list on 31 December of each year, 1964-71.

Birth Rate

For some years Bristol has followed the national trend with a fall in the total number of births per year (Fig. 1) and in the birth rate (Fig. 2). This has been promoted by the increased availability of all methods of contraception. If the Abortion Act has had a significant effect on the birth rate the fall, already occurring before 1968, should have become accentuated in a community such as Bristol, which performs about 1,000 legal terminations a year. Reference to Figs. 1 and 2 shows that this has not been so. It may be that the Abortion Act has engendered a

less responsible attitude to contraception or that there has been an actual increase in the number of promiscuous pregnancies in unmarried women. The hope that the type of patients previously having criminal abortions would request legal termination after the Act of 1967 is not supported by our experience, which suggests that the number of criminal abortions has increased since the Abortion Act.

Illegitimate Births

Any anticipated fall in illegitimacy after the Abortion Act has been slow to appear in Bristol (Table III). The number of illegitimate births remained virtually unchanged between 1967 and 1970. It remains to be seen whether the modest fall in 1971 will be maintained.

TABLE III—*Illegitimate Births in Bristol Expressed as Percentage of Total Number of Births (Live Births and Still Births)*

Year	1964	1965	1966	1967	1968	1969	1970	1971
Births . . .	7,610	7,720	7,410	7,094	6,834	6,542	6,340	6,417
Percentage Illegitimate Births	8.8	9.7	9.8	10.6	10.4	10.6	10.4	8.6

Discussion

Clearly the hope that the increased work load resulting from the Abortion Act could be easily absorbed into existing gynaecological services has been unjustified. We doubt if the Act has caused any reduction in birth rate or illegitimacy, and possibly criminal abortions have increased. Whatever has been achieved in socioeconomic benefits has been at great cost to ordinary gynaecological patients. In our experience the waiting list for inpatient treatment has increased by 200%. No estimate can now be given for the waiting time for non-urgent operations as the department can only just keep pace with urgent admissions and legal abortions. This is in spite of the fact that we have increased our surgical load by 45% and generally reduced the duration of stay of patients to levels which we consider undesirable.

On a general note we feel that the Act has had a serious effect on the quality of training which we can provide for nurses, medical students, registrars, and house surgeons. Certainly in our unit all nursing and medical staff have experienced a reduction in job satisfaction, with a frustration resulting from our inability to treat gynaecological patients in need.

The plea for special abortion units has already been made. These include provisions of beds, theatre facilities, and nursing and medical staff. Such units could not be isolated but should be part of a general hospital with all the necessary auxiliary services. It could well be that if such units were working on a five-day week basis married nurses would be prepared to staff them by working part time, knowing that there was no weekend duty involved. On the medical side it is unlikely that any suitably qualified practitioners would be prepared to undertake abortions as a full-time job unless it involved enormous financial rewards. We must therefore accept legal abortion as part of our gynaecological duties but only if such work is drastically diluted. This plan can be achieved only by an urgent increase in available beds and by a corresponding increase in consultant and junior medical staff of all grades.

The *Daily Telegraph* on 1 February 1972 contained an article suggesting that Roman Catholic gynaecologists were having difficulty in obtaining posts in this country. In the present state of gynaecology it is not surprising that prejudice is shown to such doctors, and we feel it our duty at present to advise young doctors to avoid gynaecology if their conscience prevents their participating in legal abortion.

We would like to thank Mr. S. D. Loxton for permission to study cases under his care. Our thanks are also due to the Department of Health, University of Bristol, for supplying the vital statistics concerning Bristol. Requests for reprints to A.H.J. at Bristol General Hospital.

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Emotional Problems of Childhood and Adolescence

School Refusal

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Absence from school which is either recurrent or of long duration is a constant problem for education authorities and school teachers. The commonest reason for absence is illness, for which about 80-90% of children are kept at home. Others are unlawfully withheld from school by their parents to help

at home, to keep a parent company, or to do the shopping for a phobic, house-bound mother. Another kind of illegal absence from school is perhaps the best known—namely, "truancy," which is non-attendance on the child's initiative, more often without the knowledge or consent of the parents and certainly without the consent of the school. Such children ostensibly set out for school but never reach there, or attend only long enough to be registered as present before leaving school alone or in the company of other truants to wander about or return home to an empty house. They often show antisocial behaviour to a greater or lesser extent in addition to school attendance problems.

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