

TABLE I.—USE OF ORAL CONTRACEPTIVES BY CONTROL SUBJECTS IN RELATION TO AGE AND PARITY

Parity	Age 20-24		Age 25-34		Age 35-44		All Ages	
	No.*	%†	No.*	%†	No.*	%†	No.*	%†
0-----	45	8.9	52	5.8	40	0.0	137	5.1
1-----	46	15.2	91	8.8	88	10.2	225	10.7
2-----	32	34.4	172	25.0	141	9.9	345	19.7
3-----	9	43.8	85	30.1	68	11.8	162	22.8
4 or more-----	7		52	28.8	70	22.9	129	27.1
All parities-----	139	20.9	452	21.0	407	11.5	998	17.1

*Number of women studied.

†Percentage of women using oral contraceptives.

RESULTS IN FATAL CASES

Twenty-five deaths occurred during pregnancy or the puerperium (class C). These are not considered in this communication. Fifty-three (17.2%) of the remaining 309 patients were using oral contraceptives at the onset of the terminal episode. Five of these 53 women had obtained their oral contraceptives from a family planning clinic, three from a gynaecologist, 39 from their general practitioner, and six from another general practitioner when their own had declined to prescribe for them.

Pulmonary embolism (77 deaths)

Class A.—Of the 26 patients in this category, only one did not have a post-mortem examination. The standard of diagnostic accuracy is therefore high in this class. Nineteen of the death certificates were signed by a coroner, four by a hospital doctor, and the remaining three by a general practitioner after post-mortem examination. Sixteen of these patients had been taking oral contraceptives at the onset of the fatal illness (Table II). The corresponding number predicted from the experience of control women of like age and parity is only 4.2³ and this great disparity in the use of oral contraceptives between the dead women and the control women is statistically highly significant ($P < 0.001$). Table III shows that the excess of users of oral contraceptives among those women who died was present within broad age and parity groups. No women in this class had been taking any other type of sex-hormone preparation before becoming fatally ill.

Class B.—Fifty-one patients who had the following predisposing conditions were allocated to class B: recent surgery (17), prolonged immobilization due to a variety of medical conditions (12), previous thromboembolism (9), cardiovascular disease (8), blood disease (3), and diabetes mellitus (2). Even though many patients had suffered prolonged ill-health, post-mortem examinations had been carried out on 43 of them and 20 death certificates were signed by a coroner. It was uncertain whether two of these patients had been using oral contraceptives at the onset of the terminal episode, but nine of the remaining 49 had been doing so (Table II). The corresponding expected number calculated from the control data is slightly smaller (6.8), but the difference between the experience of the study and control groups is not statistically significant.

If classes A and B are combined a highly significant excess of oral contraceptive users among the women who died is still found (Table II, $P < 0.001$). Errors in the assessment of predisposing conditions cannot therefore be responsible for the strong association between death from pulmonary embolism and the use of oral contraceptives.

³ Throughout this report the expected numbers of women using oral contraceptives have been calculated from the data shown for control subjects in Table I. In making any calculation the first step was to classify the dead women, irrespective of known oral contraceptive use, into the same age and parity groups as those shown in Table I. The expected number of oral contraceptive users in each cell of the table was obtained by multiplying the cell total by the corresponding percentage in Table I and dividing the result by 100. The individual cell expected numbers were then summed to give the overall expected number.

For tests of significance, the control data shown in Table I were reclassified in nine subgroups by combining adjacent cells containing similar percentages, and the method of Mantel and Haenszel (1959) was applied.