

***Pregnancy in women using intra-uterine contraceptive devices***

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**SUMMARY.** Among 1,041 women fitted with intra-uterine contraceptive devices during a period of 21,445 months there were 51 pregnancies: a rate of 2.9 per hundred women years. Pregnancy occurred most commonly in the young and nulliparous. The importance of the patient checking her device is stressed. Pregnancy occurs most commonly soon after fitting, but may occur at any time. In more than half the cases pregnancy occurred with the device in the uterus. Though most pregnancies were uterine there was a high incidence of ectopic pregnancies. Many pregnancies ended in vaginal delivery, but since the Abortion Act 1967 fewer probably now go to term.

**Introduction**

In an earlier paper (Hull and Henderson, 1975), we described our experience with 1,041 women attending clinics for intra-uterine contraception. In this series 51 pregnancies occurred in a period of 21,445 women-months giving a pregnancy rate of 2.9 per hundred women-years. Of these, 34 pregnancies occurred among 654 patients fitted by one of us (FMH) and 17 pregnancies in the 387 patients fitted by the other. Pregnancy rates for each doctor are similar.

Failure of the device occurred most often in young patients (table 1) and in nulliparous patients confirming the findings of Howard (1972) (table 2). All the failures occurred with

**TABLE 1**  
FAILURE RATES RELATED TO AGE OF PATIENT

<i>Age</i>	<i>Total</i>	<i>Pregnant</i>	<i>Pregnancy rate</i>
20	26	2	1:13
20-24	208	11	1:19
25-29	391	27	1:14.5
30-34	220	7	1:31
35-39	128	4	1:32
40	74	0	0:74
<i>Total</i>	1041	51	1:20.4

**TABLE 2**  
FAILURE RATE RELATED TO PARITY OF THE PATIENTS

<i>Parity</i>	<i>Total</i>	<i>Pregnant</i>	<i>Pregnancy rate</i>
0	14	3	1:4.7
1	192	9	1:21.3
2	437	21	1:20.8
3	228	9	1:20.5
4	93	4	1:23.5
5	41	3	1:13.7
6	12	1	1:12.0
7	12	0	0:12.0
8	7	1	1:7.0
78	5	0	0: 5
<i>Total</i>	1041	51	1:20.4

'Lippes Loops', mostly with size C (40) some with size D (eight), size B (two), and one with size A. The earlier paper showed that the majority of devices fitted were 'Lippes Loops' so this finding is not surprising. Although very few of the small devices were fitted these were usually in nulliparous patients, who had a high failure rate.

Patients were advised to check the presence of their device by palpating its tail after each menstrual period. Table 3 shows that of those known to be checking their device fewer became pregnant. This highlights the importance of instructing patients how to check themselves.

TABLE 3  
SIGNIFICANCE OF PATIENTS CHECKING THEIR OWN DEVICES

	<i>Pregnant group</i>	<i>Non-pregnant</i>
Checking device	13	249
Not checking	6	94
Not known	32	698
<i>Total</i>	51	1,041

Ratio not checking/checking:

Pregnant group                    1:2.1  
Non-pregnant group                1:2.6

Pregnancy may occur at any time after fitting, but in this series 70 per cent became pregnant within 15 months of fitting. The longest interval between fitting and pregnancy was four to five years (table 4).

TABLE 4  
TIME FROM FITTING TO CONCEPTION

<i>Number of months since fitting</i>	<i>Conception</i>
0	4
1-5	12
6-10	9
11-15	10
16-20	6
21-25	2
26+	8
<i>Total</i>	51

In 12 cases the device was known to have been discharged from the uterus, in 29 cases the device was inside the uterus, in nine its whereabouts were not known and in one case (Hull, 1973) it was in the pelvis.

In 16 cases the fate of the device was not known. In 14 the device appeared at abortion. In nine the device was thought to have been discharged before pregnancy ensued, in two cases it was discharged during pregnancy, in six it appeared during labour, usually with the placenta, and in four cases it was removed at operation.

Of the pregnancies, 48 were uterine and three were tubal. This high incidence of tubal pregnancy is as expected for the device does not appear to be as efficient at preventing tubal as uterine pregnancy (Ramkissoon-Chen; Kong Ta-Ko, 1966; Tietze, 1966).

The outcome of pregnancy is shown in table 5; 40 per cent of pregnancies ended in full term delivery. Many of these occurred before the Abortion Act and the incidence of termination of pregnancy has been higher since that Act. Many gynaecologists look with sympathy on requests for termination in the presence of an IUCD and since the Act more than one in five unwanted pregnancies are likely to have been terminated under the National Health Service.

TABLE 5  
OUTCOME OF PREGNANCY

Normal delivery	19
Full-term stillbirth	1
Spontaneous abortion	11
Termination (NHS)	10
Termination (Private)	3
Laparotomy	2
Not known	5
<i>Total</i>	51

One previously unrecorded trend emerged from this study: male children resulting from failure of the intra-uterine contraceptive devices are frequently christened after the doctor who fitted the device!

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