CYTOLOGIC STUDY OF ENDOMETRIAL ASPIRATION AND ENDOCERVICAL SWAB SMEARS IN INTRA UTERINE CONTRACEPTIVE DEVICE USERS

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SUMMARY

The incidence of inflammation was higher among study group than control group. So IUCD may cause endometritis and cervicitis. The incidence of inflammation and dysplasia was higher among loop users than Copper-T. It had decreased with prolonged use of device. Thus device is safe even after long duration of use of device and Coppr-T is more safe than loop. No case had been reported either fairly or strongly conclusive of malignancy. So these devices do not cause any premalignant change of cervix and endometrium.

So these devices do not require elaborate health care delivery systems and can be applied on broad basis with high degree of efficiency and safety. However, the screening of cases using devices coming to out-patient department with PAP smear should be regular feature to detect positive cases of dysplasia and malignancy.

Introduction

Contraception is the prevention of conception other than abstinance from coitus, its use to limit the size and age structure of family and family welfare or birth control. Contraception by medical profession is recognised as having the greatest importance in the field of preventive medicine being essential to health and welfare of individuals, families. IUCD is acceptable as one of the reversible, effective, safe and economic method of contraception. The number of patients using IUCD has been increasing in India. The oocurrence of atypical and dysplastic cells in routine Papanicolaou's smear has become a diagnostic problem with the widespread use of IUCD.

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Material and Methods

This study comprised of hundred females using IUCD as a form of contraception for varying periods as study group and 50 age matched female as control group. All cases were attending Gynaecology Out-patient Department from Nov. 1985 to 30th Oct. 1986 of S.V.B.P. Hospital attached to L.L.R.M. Medical College, Meerut. In every case a detailed history was taken and gynaecological examination was done. Endocervical swab and endometrial aspirate smears were prepared, fixed and stained by Papani-

colaou's technique in order to assess the inflammatory dysplastic and suspicious changes in the exfoliated cells of endometrium and endocervix. These changes were correlated along with age of patient, parity, number of abortions, background, hygiene of patient and type of device used.

Observations and Analysis

Table I shows all cases of study group were divided into four main groups depending on the duration of use of contraceptive device. Group I (the cases who accepted device for less than one year) included 41 cases. Group II (the cases who accepted device for one-two years) included 22 cases. Group III (the cases who accepted device for two-three years) included 24 cases. Group IV (the cases who accepted device for more than 3 years) included 13 cases. Control group included 50 cases.

Table II shows distribution of cases according to type of contraceptive device used. In group I all cases had used Copper-T. In group II all cases i.e. 22 had used Copper-T. In group-III 83% cases had used Copper-T and 16.6% had used Lippe's loop. In group IV 69.2% had used Copper-T and 30.7% Lippe's loop.

Table III shows classification of various groups seen in Papanicolaou's smear. Class I means normal smear, class II inflammatory smear, class III suspicious smear, class IV and V means that smear is either fairly or strongly conclusive of malignancy.

Table IV shows distribution of cases using Copper-T into various grades of Papanicolaou's classification in successive groups. The incidence of inflammatory smears of cervix and endometrium was among 42 (40.3%) cases and 17 (18.4%) cases. The incidence of inflammation decreased along with more duration of

TABLE I
Disribution of Various Cases Into Groups

Groups	Distribution of Cases	No. of Cases
1. **Study Gruop**		100
(i) Group I	Device used for less than one year	41
(ii) Group II	Device used for one-two years	22
(iii) Group III	Device used for two-three years	24
(iv) Group IV	Device used for more than three years	13
2. **Control Group**		50

TABLE II
Distribution of Cases of All Groups According to Type of Contraceptive Devices Used

Type of Contraceptives used	Group I	Group II	Group III	Group IV
Copper-T	41 (100%)	22 (100%)	20 (83.33%)	9 (69.23%)
Lippe's Loop	—	—	4 (16.67%)	4 (30.77%)
Total Cases	41	22	24	13

TABLE III
Classification of Papanicolaou's Smears

Class	Type of Smears
Class I	Normal/absence of atypical cells
Class II	Inflammatory cells/no evidenec of malignancy
Class III	Suspicious cells
Class IV	Cytology fairly conclusive of malignancy
Class V	Cytology strongly conclusive of malignancy

use of Copper-T. The incidence of dysplastic smears of cervix and endometrium was 4.3% and 5.4% respectively. No case was fairly or strongly conclusive of malignancy. Thus Copper-T is safe even after long duration of use.

Table V shows the distribution of cases into various grades of Papanicolaou's classification in successive group who had used Lippe's loop. The incidence of inflammatory smears of cervix and endometrium was 62.5% and 12.5%. No case

TABLE IV
Distribuution of Cases Using Copper-T Into Various Grades of Papanicolaou's Classification in Successive Groups I.E. With Duration of Use of Copper-T

Class		Group I	Group II	Group III	Group IV	Total
Class I	C	16	14	12	4	46 (55.4%)
	E	33	16	16	5	70 (76.2%)
Class II	C	23	7	8	4	42 (40.3%)
	E	8	3	4	2	17 (18.4%)
Class III	C	2	1	—	1	4 (4.3%)
	E	—	3	—	2	5 (5.4%)
Class IV	C	—	—	—	—	—
	E	—	—	—	—	—
Class V	C	—	—	—	—	—
	E	—	—	—	—	—

C = Cervical Cytology.
E = Uterine Aspirate Cytology.

TABLE V
Distribution of Cases Using Lippe's Loop Into Various Grades of Papanicolaou's Classification in Successive Groups I.E. With Duration of Us of Lippe's Loop

Class		Group I	Group II	Group III	Group IV	Total
Class I	C	—	—	2	1	3 (37.5%)
	E	—	—	2	4	6 (75.0%)
Class II	C	—	—	2	3	5 (62.5%)
	E	—	—	1	—	1 (12.5%)
Class III	C	—	—	—	—	—
	E	—	—	1	—	1 (12.5)%
Class IV	C	—	—	—	—	—
	E	—	—	—	—	—
Class V	C	—	—	—	—	—
	E	—	—	—	—	—

C = Cervical Cytology.
E = Endometrial Cytology.

was having cervical dysplasia while one had endometrial dysplasia. No case was suggestive or conclusive of malignancy.

Table VI shows comparative incidence of inflammation and dysplasia among Copper-T and Lippe's loop users. The incidence of inflammation of cervix among Copper-T and Lippe's loop cases were 45% and 62.5% respectively. The incidence of dysplasia of endometrium among Copper-T and Lippe's loop cases were 5% and 12.5% respectively. So the incidence of inflammation and dysplasia was higher among Lippe's loop users than Copper-T. So Copper-T is more safe than loop.

TABLE VI

Comparative Statement of Copper-T and Lippe's Loop Users

Cytological smear pattern		Copper-T Users (%)	Lippe's Loop Users (%)
Inflammation	C	45	62.5
	E	18	12.5
Dysplasia	C	4	—
	E	5	12.5
Total No. of Cases		92	8

C = Cervical Cytology.
E = Endometrial Cytology.

Table VII shows the comparative statement of incidence of inflammation and dysplasia among study group and control group. Thus IUCD does not cause any premalignant change even after long duration of use.

TABLE VII

Comparative Statement of Incidence of Inflammation and Dysplasia in Study Group and Control Group

Cytological Smear Pattern		Study Group (%)	Control Group (%)
Inflammation	C	53.7	14
	E	15.0	8
Dysplasia	C	2.0	4
	E	8.5	2
Total No. of cases		100	50

E = Endometrial Cytology
C = Cervical Cytology

The incidence of inflammation and dysplasia among contraceptive users increased with age, parity, increased number of abortions and among rural population. No correlation was found with hygiene of patient.