# COLPOSCOPIC STUDY OF THE EFFECT OF IUCD ON CERVICAL EPITHELIUM

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#### SUMMARY

The present study was conducted to observe the effect of IUCD on cervical epithelium. Study group had 2 subgroups A & B. Group A were those who opted for the use of IUCD and group B were those who were using IUCD for 1-3 years. All women were called for follow-up after 1 month, 4 months & 7 months. On every visit per speculum, cytological & colposcopic examinations were done. The study showed that IUCDs neither initiated carcinoma in cervixnor enhanced the already existing grade of dysplasia in both short term & long term users.

#### **INTRODUCTION**

Widespread use of contraceptives has stimulated studies as regards their effect on cervical epithelium and possibility of development of cervical dysplasia after their use. The present study has been conducted to observe changes caused by IUCD (CuT 200) on cervical epithelium, as also to note if IUCD use initiates dysplastic changes or enhances the grade of the already existing dysplasia in cervix.

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### MATERIAL AND METHOD

Total number of cases selected were 166, out of which 52 were control and 114 constituted the study group. Cases in the two groups were well matched regarding their age, parity and socioeconomic status etc. Study group consisted of Group A - 42 cases who opted for CuT 200 insertion but were not using any contraceptive previously. Group B -72 cases who were already using CuT 200 for last 1-3 years. Preinsertional cytology or colposcopy had not been done in these cases. Detailed history with special reference to history of blood stained discharge or contact bleeding was reworked and a complete clini-

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cal examination was done. Cytological and colposcopic examination were done in all the women. Colposcopically directed punch biopsy was taken whenever indicated. Cytological smears were interpreted as - normal, inflammatory, mild, moderate and severe dysplasia and suspicious for malignancy smear. In suspected cases when Pap smear was found to be positive, colposcopically directed biopsy was taken for histopathological examination. Colposcopic findings were classified according to the criteria of American society for colposcopy (1973).

All women were advices to come for follow-up after 1, 4 & 7 months of insertion of CuT 200 and as per speculum, cytological and colposcopic examination was done in all women. Women with abnormal findings were called every month. Women with inflammation were treated accordingly.

## **OBSERVATION AND DISCUSSION**

Maximum cases belonged to the age group of 25-30 years (38.46% in control and 41.34% in study group). Higher age group participated minimally (7.68% in control and 8.65% in Study group). Mean age for control group and for study group A and B was 27.4, 26.3 & 27.1 years respectively. Debancens et al (1974) have made similar observations.

Most of CuT 200 users were IInd paras (46.15%), only 28.84% primiparas opted for it. Mean parity in control and study groups was 3.1 and 2 respectively. Table 1 shows the number of CuT users in various socio economic groups. This parameter was carefully studied because of the fact that incidence of cervical dusplasia and cancer is higher in low socio economic groups. This table shows that maximum IUCD users belonged to lower socioeconomic group (64.5%). Debances et al 91974) have also noted the same findings.

Before insertion of CuT 200 76.19% women showed normal and 19.04% showed inflammatory pap smears in study group as against 61.53% normal and 34.60% inflammatory pap smears in the control group. This statistically is not a significant difference. During 3-7 months of follow up the incidence of inflammatory smears decreased to 4.76% with an obvious increase in incidence of normal smears to 95.20%. Mild dysplasia was detected in 2 cases only (4.76% and regressed to normal in the 7 months check up. One

Socioeconomic		Group A		Group B		Table %	
Status	No.	%	No.	%	No.		
I. Upper	-		-	-	-	-	
II. Upper Middle	4	9.5	4	5.5	8	8.65	
III. Lower Middle	16	38.0	16	22.22	32	27.88	
IV. Upper Lower	22	52.3	52	72.2	74	64.5	
V. Lower	-		-		-		
Total	42		72	-	114		

TABLE I

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TABLE II

Cytological Findings In Control And Study Group 'A'											
Type of Smear	Control group		ist visit		group After 1 month	num	ber o	of cases After 4 months		After 7 months	
No.	%	No.	%	. No.	%		No.	%	No.	%	
1. Normal 32	61.53	32	76.19	34	80.95	- 10	34	80.95	40	95.20	
2. Inflammatory 18	34.60	8	19.4	6	14.28		6	14.28	2	4.76	
3. Mild dysplasia -	-	2	4.76	2	4.76		2	4.76	and any a	entino_	
4. Moderate dysplasia -		-		- 100	-		-	1	2011 (Sd	and the second	
5. Severe dysplasia 1	1.92		eletoro HISTOP	-	anno al		-			N.	
6. Suspicious Malignant Cells 1	1.92			these a			-				
Total Cases 52	and a spin	42	in the	42	and the state	1	42		42	To state a	

Cytological Findings In Control And Study Group 'A'

case each of severe dysplasia and suspected malignant cells smear (1.92%) were treated accordingly after further investigations.

In the control group abnormal colposcopic findings were present in only 2 cases, one of them showed CIN grade III and the other microinvasive carcinoma. These two cases were the ones who on cytological examination had shown severe dysplasia and syspicious malignant cell smear (Table II).

A'

TABLE III										
Colposcopic	Finding	in	Control	And	Study	Group	6			

	Control Study group Number of cases									
Type of Smear		group	1	st visit		After 1	A	fter 4	ł	After 7
	No.	%	No.	%	No.	month %	n No.	nonths %	No.	months %
1. Normal	-32	61.53	24	57.14	28	66.66	38	90.4	40	95.2
2. Physiological and benign										
changes	17	32.69	· 16	38.0	12	28.57	4	9.52	2	4.76
3. Abnormal	2	3.84	-	-	-	-	-		-	-
4. Unsatisfactory	1	1.92	2	4.76	2	4.76	-	-	-	
5. Miscellaneous	-	-	-	-		-	-			

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In the study group the incidence of normal colposcopic findings detected in 57.14% cases increased to 95.2% in the 7 months checkup, whereas the incidence of physiological and benign changes decreased from 38.09% to 4.76%. We thus observed that IUCD had no carcinogenic effect on cervical epithellium.

Tietz (1966) followed up 4800 women after IUCD insertion by vaginal cytology and reported regression of dysplasia in 66.66% of cases. Wahi et al (1968) followed up 292 women and made similar observations.

Both the above tables show that in long term users of IUCD (from 1-3 years) the incidence of normal pap smear and colposcopic findings increased (from 77.77% to 88.88% & 66.66 to 83.33%) and the incidence of inflammatory smears and physiological and benign changes decreased (from 16.66% to 5.54% &

TABLE IV Cytological Findings in Group 'B' Cases

Type of Smear	1	lst visit		y group After 1 month	B No.	of cases After 4 months	After 7 months	
	No.	%	No.	%	No.	%	No.	%
1. Normal	56	77.77	58	80.55	60	83.33	66	88.88
2. Inflammatory	12	16.66	10	13.88	8	11.11	4	5.54
3. Mild dysplasia	2	2.77	2	2.77	2	2.77	-	-
4. Moderate dysplasia	2	2.77	2	2.77	2	2.77	2	2.77
5. Severe dysplasia		1.01-		-	-		1	- 11
6. Suspicious of malignant cells		-	-	-				
Total	72	-	72	-	72		72	

TABLE V									
Colposcopic	Findings	In 'B'	<b>Group Cases</b>						

Colposcopic Findings	1	st visit		group 'B' After 1 month		After 4 months	After 7 months	
	No.	%	No.	%	No.	%	No.	%
1. Normal	48	66.66	50	69.44	54	75.0	60	83.33
2. Physiological & benign								
changes	18	30.55	16	27.77	14	19.39	8	11.08
3. Abnormal	4	5.54	4	5.54	4	5.54	4	5.54
4. Unsatisfactory	2	2.77	2	2.77	-	-	-	-
5. Miscellaneous	-	-	-	-	-	-	-	

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30.55% to 11.08%) as was seen in group A also. Mild dysplasia found in 2.77% cases regressed after 7 months but moderate dysplasia persisted, thus confirming again that iucd neither causes any malignant change nor increases the grade of already existing dysplastic changes in the cervix even in the long term users.

Aikat & Chadda (1980) and Engineer et al (1961) showed and agree with us that prolonged use of Cu IUCDs neither causes dysplasia nor carcinoma in the cervix. Affandi & Virkar (1976) also confirm that long term use of copper devices does not have any undesirable effect on normal or dysplastic cervical epithelium.

In our study there was no significant difference in the incidence of dysplasia in KUCD users and non users (the incidence being 5.76% in users and 3.84% in non users) as seen by vaginal cytology. Luthra (1975) & Luthra et al (1978, 1982) have drawn similar conclusions in their various studies. Medhat et al (1980) found that IUCD users had the device in situ for 60 months but there was no evidence of any malignant change with their use, also there was no significant difference in the incidence of dysplastic abnormalities between IUCD users and non users.

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