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A SOCIO-MEDICAL STUDY OF MORPHOLOGICAL CHANGES IN ENDOCERVIX WITH THE USE OF ORAL CONTRACEPTIVES

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The present study was conducted among the oral contraceptive users to see any impact of their social factors on the morphological changes in the endocervix. These changes were seen more prominantly in the advancing age, low socio-economic group multiparous and having their marital life more than 5 years period. The oral contraceptives were taken by 53.33 percent of women for 7-18 months duration. The prevalence and severity of the morphological change increased significantly with the increase in duration of use of contraceptives. However no relationship was observed with the religion and nativity of the users as well as the types of oral contraceptives used.

INTRODUCTION

According to the present estimates, over 80 million women around the world use 'the pill' (WHO)[1]. Like any drug, these contraceptives can not be made free of adverse potentials. It was observed that women using oral contraceptives have cervical displasia and neoplasia more than the general population. Stern et al[2], Kline[3] and Ory et al[4] reported the relative risk of cervical carcinoma in situ for oral contraceptive users as compared to non users to be increased with duration of their use.

The present study was under taken to see the relationship of morphological changes with social factors like age, socio- economic status, parity, marital status and duration of use of oral contraceptives.

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MATERIAL AND METHODS

The present study was conducted in S.R.N. and Kamla Nehru Hospital of M.L.N. Medical College, Allahabad. A total of 120 women were studied who were taking oral contraceptives regularly. A detailed history was taken with special reference to the name, age, parity, socio-economic status, marital status, menstural history and duration of oral contraceptives used and any complaints before or during the use. After doing the proper general and systemic examination per speculum and per vaginal examination was done to see any discharge, cervical erosion and inflammation of cervix. Cervical scrape smears were taken by means of a wooden spatula and stained by standard Papanicolaou's technique[5]. The cases were grouped in seven groups (Singh et al)[6] - normal, chronic cervicities, displasia - mild, moderate and severe, carcinoma in situ and invasive carcinoma.

RESULTS AND DISCUSSION

Normal histology of cervix was found in 40 cases (33.33 percent), Chronic cervicitis in 50 cases (41.67 percent). mild displasia in 14 (11.6 percent), moderate displasia in 10 (8.53 percent) and severe displasia in 4 cases (3.33 percent) and carcinoma in situ in 2 cases (1.67 percent).

The maximum number of oral contraceptive users (68.93 percent) were between 21-30 years of age. The prevalence of displasia was found to increase significantly with age among oral contraceptive users. The higher prevalence of chronic cervicitis was found in 20-30 years of age (72.0 percent) while displasia

(64.28 percent) was found in 30-40 years of age (Table-I).

81.67 percent of cases had 1-4 children while 18.33 percent were multiparous. The prevalence and severity

TABLE - 1
RELATIONSHIP OF MORPHOLOGICAL CHANGES WITH AGE AMONG ORAL CONTRACEPTIVE USERS.

Age in Years	Normal	Chronic Cervicitis	Dysplasia			Carcinema insitu	Invasive carcinoma	Total
			Mild	Moderate	Severe			
16-20	12 (75.0)	4 (25.0)	—	—	—	—	—	16 (13.33)
21-25	16 (44.44)	14 (38.89)	4 (11.11)	2 (5.56)	—	—	—	36 (30.0)
26-30	10 (21.75)	22 (47.83)	6 (13.04)	6 (4.34)	2 —	— —	— —	46 (38.33)
31-35	2 (10.0)	10 (50.0)	4 (20.0)	2 (10.0)	— —	2 (10.0)	—	20 (16.67)
36-40	—	—	—	—	2 (100.0)			2 (1.67)
40+	—	—	—	—	—	—	—	—

Singh and Baveja7 reported 47.5 percent of displasia in the age group of 21-30 years whild Worth & Goyes8 reported no effect of age on endocervical displasia after the use of oral contraceptives. Rotkin9 stated that the prevalence of invasive cervical cancer increases with age until the menopause and then afterwards declines.

The prevalence of chronic cervicitis and displasia was found significantly higher in low socio-economic group (Prasad classification)10 and might be related to sexual freedom after the use of pills, early age of marriage, multiparity and vaginal infections (Table-2). Rao & Krishna[11], Singh & Baveja[6] and Engineer et al[12] had also reported the similar findings.

of inflammation and displasia was found significantly to increase with parity. The severe displasia was seen (16.66 percent) in multiparous (Table- 3). These change might be due to traumatic effect to the cervical epethelium by repeated deliveries and higher levels of ovarian hormones first during the pregnancy and then by taking oral contraceptives. The findings were similar to those reported by Wahi et al[13] and Rao[11].

The chronic cervicitis and displasia was found to be increased with the duration of marital life among the oral contraceptive users. The highest prevalence of chronic cervicitis were reported 3 years after. The mild & moderate displasia between 6-10 years and severe displasia and carcinoma in situ was observed only after

TABLE - 2
RELATIONSHIP OF MORPHOLOGICAL CHANGES WITH SOCIO-ECONOMIC STATUS AMONG ORAL CONTRACEPTIVE USERS.

Social - Class*	Normal	Chronic Cervicitis	Dysplasia			Carcinema insitu	Invasive carcinoma	Total
			Mild	Moderate	Severe			
I	10 (62.50)	4 (25.0)	2 (12.5)	—	—	—	—	16 (13.34)
II-III	18 (42.85)	14 (33.33)	4 (9.52)	4 (9.52)	2 (4.76)	—	—	42 (35.0)
IV-V	12 (19.35)	32 (51.62)	8 (12.90)	6 (9.67)	2 (3.23)	2 (3.23)	—	62 (51.66)
Total	40 (33.33)	50 (41.67)	14 (11.67)	10 (8.33)	4 (3.33)	2 (1.67)	—	120 (100)

Test of Significance X^2 - 5.43, df - 2, P < .05

Note : Figures in parentheses demote percentage.

TABLE - 3
RELATIONSHIP OF MORPHOLOGICAL CHANGES WITH PARITY AMONG ORAL CONTRACEPTIVE USERS.

Parity	Normal	Chronic Cervicitis	Dysplasia			Carcinema insitu	Invasive carcinoma	Total
			Mild	Moderate	Severe			
Nil	14 (63.63)	8 (36.67)	—	—	—	—	—	22 (18.33)
1 - 2	20 (34.49)	28 (48.28)	6 (10.34)	4 (6.89)	—	—	—	58 (48.34)
3 - 4	6 (21.42)	12 (42.85)	4 (14.29)	4 (14.29)	2 (7.15)	—	—	28 (23.33)
5 - 6	—	2 (16.66)	4 (33.33)	2 (16.66)	2 (16.66)	2 16.66)	—	12 (10.00)
Total	40 (33.33)	50 (41.67)	14 (11.67)	10 (8.33)	4 (3.33)	2 (1.67)	—	120 (100)

Test of Significance X2 - 9.15, df - 2, P < .01
Note : Figures in parentheses demote percentage.

10 years of marriage (Table-4).

Rao11, Baveja & Singh6 had also reported the similar observations. The factor responsibile for these changes might be due to effect of smegma and trauma to the cervical epithelium.

In the present study, the prevalence and severity of cervical displasia was found to increase significantly with the duration of use of oral contraceptives (P<.001) (Table-5). The chronic cervicitis was seen mostly within 6-12 months duration of use while displasia and carcinoma in situ was mainly found after 18 months of use.

Ory[4] observed that the relative risk of cervical carcinoma in situ for oral contraceptive users as compared to non users was 1.3 for 1-12 months of use. 2.5 for 13 to 30 months of use and 2.6 for above the 30 months of use.

TABLE - 4
RELATIONSHIP OF MORPHOLOGICAL CHANGES WITH DURATION OF MARITAL LIFE AMONT ORAL CONTRACEPTIVE USERS.

Fufation of Marital Life (in Years)	Normal	Chronic Cervicitis	Dysplasia			Carcinema insitu	Invasive carcinoma	Total
			Mild	Moderate	Severe			
0 - 2	24 (63.16)	12 (31.58)	2 (5.26)	—	—	—	—	38 (31.66)
3 - 6	14 (25.01)	32 (57.14)	6 (10.71)	4 (7.14)	—	—	—	56 (46.66)
7 - 10	2 (10.0)	6 (30.0)	6 (30.0)	4 (20.0)	2 (10.0)			20 (16.67)
11 - 15	—	—	—	2 (50.0)	2 (50.0)		—	4 (3.33)
15 +	—	—	—	—	—	2 (100.0)	—	2 (1.66)
Total	40 (33.33)	50 (41.67)	14 (11.67)	10 (8.33)	4 (3.33)	2 (1.67)	—	12- (100.0)

Note : Figures in parentheses demote percentage.

CONCLUSION

Stern et al[2] reported that oral contraceptive use does

TABLE - 5
RELATIONSHIP OF MORPHOLOGICAL CHANGES IN ENDOCERVIX WITH THE DURATION OF USE OF ORAL CONTRACEPTIVES.

Duration of use (in months)	Normal	Chronic Cervicitis	Dysplasia			Carcinema insitu	Invasive carcinoma	Total
			Mild	Moderate	Severe			
0 - 6	18 (56.25)	14 (43.75)	0	—	—	—	—	32 (26.66)
7 - 12	14 (31.82)	24 (54.54)	4 (9.0)	2 (4.54)	—	—	—	44 (36.67)
13 - 18	8 (33.33)	8 (33.33)	4 (16.67)	4 (16.67)	—	—	—	24 (20.0)
19 - 24	—	4 (33.33)	4 (33.33)	2 (16.67)	2 (16.67)	—	—	12 (10.0)
25 - 36	—	—	—	2 (33.33)	2 (33.33)	2 (33.33)	—	6 (5.0)
36 +	—	—	—	—	2 (100.00)	—	—	2 (1.67)
Total	40 (33.33)	50 (41.67)	12 (10.0)	10 (8.33)	6 (3.33)	2 (1.66)	—	120 (100.0)

Test X^2 - 14.9, df - 2, P < .001
Note : Figures in parentheses demote percentage.

not increase the subsequent prevalence of abnormal cervical cytology among women with normal smears before the use. Extended oral contraceptive use (over 6 years) appears to increase by several times the rate of conversion of cervical dysplasia to carcinoma in situ among women with displasia at the time they begin using oral contraceptive (WHO[1]).

Hence thorough screening of women is advised prior to starting of the contraceptings.

Since there is always a risk of change of dysplasia to neoplasia, a close follow up is advised when the women is taking oral contraceptives for prolonged period of time.

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