# ACTINOMYCES LIKE ORGANISMS IN CERVICO VAGINAL SMEARS OF USERS OF INTERAUTERINE CONTRACEPTIVE DEVICES IN KASHMIR

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SUMMARY

**To find out the prevalence of Actinomyces like infection in I.U.C.D. users and impact of prolonged retaining of IUCD in Kashmiri women attending Gynaeology and Obstetric O.P.D. of SKIMS Srinagar. A total of 387 IUCD users and 120 Non-users were examined taking cervical smears from external OS and staining by Gram's Stain and Papanicolaeu Stain. Ladies with IUCD for less than one year of IUCD insertion were free of infection when infection rate increased with the increasing duration of IUCD use. 20% positivity was seen in those having IUCD for more than7 years. Maximum 8.33% positivity was seen in age group of 30-39 years thus bringing out importance of proper health education at the time of insertion of IUCD regarding its optimum period of retaining, importance of its replacement and gynaecological check ups periodically.**

## *Introduction*

The associatries of actinomyces - like organisms in cervico-vaginal smears of women using intrauterine contraceptive devices (IUCD) seems well established (Gupta et al, 1976; Jones et al, 1979; Duguid et al, 1982; Hager et al, 1979). During the last ten years actinomyces have increasingly been recognised. Since the publication of original observations on the occurrence of actinomyces in cervico-vaginal smears from IUCD users by Gupta et al (1976). It is believed that the presence of actinomyces in the vaginal smear is always associated with a foreign body, most commonly an IUCD. But there are reports flora in the absence of an IUCD and in non-IUCD users who had foreign bodies in place in the cervix or vagina (Petitti et al, 1983).

IUCD is the most commonly used reversible contraceptive method in our country. It will be important to accurately define the prevalence and incidence of actinomyces infection among IUCD users throughout the country. We report here

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our findings on women using IUCD who attended outpatient Obstetrics & Gynaecology Clinic of our Institute (S.K. Medical Institute, Srinagar).

### *Material and Methods*

A total of 387 women were examined who were using the IUCD for varying periods of time. A distinction was made between urban and rural users to see if any difference exists in prevalence of actinomyces infection in the two groups though the clinic is attended mostly by urban population. A total of 20 women were examined who were not using an IUCD and had neither used one in the immediate past (within six to eight months). Cervical smears were made, for Gram's stain and Papanicolaeu stain. Detailed history of IUCD users was taken regarding any symptoms, discharge etc. Details of age, duration of IUCD use, type of IUCD and place of residence. Distribution of cases is given in the Table I and of non-users in Table II.

### *Cytopathology*

Actinomyces organisms in the Papanicoleou smear may occur in several patterns. The most common one is isolated, irregular, dense, dark-brownish to black bodies of various sizes (Gupta, 1982). We found this pattern in only ten of the 30 suspected cases. In other twenty, the organisms were found diffusely, covering most of the smear filaments showing beaded appearance and irregular staining at places. Minimal or no inflammatory

**TABLE I**
**DISTRIBUTION OF CASES BY AGE, DURATION OF IUCD USE, TYPE OF IUCD AND RURAL/URBAN RATIO IN IUCD USERS**

| Factor | Total No. 387 | No.having actinomyces-like organisms | %age of +ve cases |
|---|---|---|---|
| Age in yrs. | | | |
| <30 | 252 | 19 | 7.53 |
| 30-39 | 120 | 10 | 8.33 |
| >40 | 15 | 1 | 6.66 |
| Duration of IUCD'S use (yrs) | | | |
| 0-1 | 86 | – | – |
| 1-3 | 224 | 18 | 8.03 |
| 4-6 | 65 | 10 | 15.38 |
| 7-9 | 10 | 2 | 20.00 |
| 10 | 2 | – | – |
| Type of IUCD used: | | | |
| CU-T | 348 | 27 | 7.75 |
| Lippe's loop | 39 | 3 | 7.69 |
| Rural/Urban: | | | |
| Rural | 132 | 11 | 8.33 |
| Urban | 255 | 19 | 7.45 |

reaction was seen in the smear. Such a presentation is thought to be uncommon (Gupta, 1982). We have kept some unstained slides of suspected cases, acetone fixed, at-20°C for future confirmation by specific immunofluorescent staining.

### *Observation & Discussion*

Actinomyces like organisms were seen in Gram's smear Papanicolaeu smear of 30 women using IUCD for 1-9 years. Out of 387 IUCD users, 89.9% were using cooper-T. None of these women had any symptoms or disease which is in confirmity with observations of Petitti et al, 1983, who have reported 2 cases of actinomyces colonization, one of which was asymptomatic. Out of 30 women in our series majority i.e. 57.88% had IUCD for 1-3 years and the number decreased with increasing duration of its insertion. None of the women who had the IUCD for less than one year could be found positive for infection of any actinomyces like organisms, when it has been established that the presence of actinomyces like organisms on Papanicolaeu smear is increasingly associated with increasing duration of IUCD use (Table I). Petitti et al (1983) found that the increase of risk was not apparent until, as long as, after 7 years of continuous IUCD use. Majority of IUCD users examined i.e. 65.89% were from urban areas and proportionately rural users examined were not too many especially in the light of rural domination in our country. This is because the Clinic is attended by more urban ladies than rural. In such a small number of cases it is difficult to comment on impact of living in rural area on actinomyces colonization. Idea to include subjects from rural areas was that there might be some difference in genital hygiene in the two groups which may possibly affecting the actinomyces colonization. Importance of detecting actinomyces in IUCD users lies in the fact the pelvic inflammatory diseases are more common in IUCD users. More than 40% of women using an IUCD and admitted for surgical therapy of pelvic inflammatory diseases have been found to have actinomyces, Gupta and Woodruff (1982).

One last point we would like to make is that identification of actinomycetic organisms by light microscopic examination of stained smears is difficult. In a study Valicenti et al (1982) found a positive immunofluerescence test for actinomyces in only 49% of Papanicolaeu smears in which actinomyces - like organisms were seen, so pending confirmation of the slides by immunifluorescent studies employing specific antisera great stress should not be laid on identification of actinomyces-like organisms by stained smears alone. IUCD users need to be given health education regarding the optimum period of retaining an IUCD, importance of replacement and periodical gynaecological check up.

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