# To Determine Frequency of Cervical Intra-Epithelial Neoplasia and Factors Contributing to it, in high risk women attending Gynae OPD of Tertiary Care Hospital

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## ABSTRACT

**Background:** Gynecological carcinomas are among the most widely recognized malignancies in female. Cervical malignancy still keeps on being second commonest female cancer around the world. It represents for significant morbidity and mortality, every year there are roughly 1500 deaths in England and Wales from cancer of cervix. Cancer of cervix has pre-malignant condition called CIN (cervical intraepithelial neoplasia). CIN may advance to invasive carcinoma over time of 3-20 years in 70% patients.

**Aim:** To determine frequency of cervical intraepithelial neoplasia and factors contributing to it, in high risk women attending Gynae OPD of tertiary care hospital.

**Methodology:** It was a descriptive-cross sectional survey which included 400 cases which fulfill the inclusion and exclusion criteria. The study period was one year from July 2017 to July 2018 and was carried out in Obstetrics & Gynaecology Department, M. Islam Medical College, Gujranwala.

**Results:** A total of 400 cases were enrolled, 112(28%) cases between 20-30 years, 134(33.5%) between 31-40, 89(22.25%) between 41-50 and only 65(16.25%) were between 51-60 years of age, mean age was 38.54+5.33 years, 89(22.25%) between 1-3 para, 248(62%) between 4-5 and only 63(15.75%) had >6 paras, frequency of cervical intraepithelial neoplasia reveals in 44(11%) out of them 19(43.18%) high parity, 17(38.64%) early marriage, 24(54.55%) had low socio economic status, 1(2.72%) had smoking history while 9(20.45%) were taking oral contraceptive pills were recorded as contributing factors of the morbidity.

**Conclusion:** It is concluded that low socioeconomical status, higher parity and early marriage are the major contributing factors in diagnosed cases of cervical intraepithelial neoplasia, in women attending Gynae OPD of tertiary care hospital.

**Keywords:** Cervical intraepithelial neoplasia, Contributing factors, Low socioeconomical status

## INTRODUCTION

Cervical cancer still continue to be the second commonest female cancer world wide.[1] In developing countries cervical cancer comprises 15% of all cancer of women as compared to <4% in develop countries.[2] It accounts for significant morbidity and mortality world wide.[3] Cervical cancer can be prevented.[4] 90% of cytological abnormalities of the cervix can be detected with cervical cytological screening. Normal epithelium of cervix does not suddenly change into malignancy but initially has pre cancerous manifestation which are termed as cervical intra epithelial neoplasia.[5] Papanicolaou smear is highly effective and simple procedure for screening of pre-cancerous cervical neoplasia.[6] However it is advised to perform biopsy if any abnormality is detected in pap smear[5]. Colposcopy is the visual examination of cervix with ascetic acid. All acetowhite lesions should be assessed with biopsy to maximize sensitivity of colposcopic diagnosis with good specificity[7].

Among Pakistani females cervical cancer is fourth most common carcinoma. Although, the incidence of cervical cancer in Pakistan is lower than that is various western countries, yet the mortality is higher. This

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higher rate of mortality is due to the late presentation of cervical cancers in Pakistan.[8] It is prescribed that all female of conceptive age group from 20-60 years ought to have pap smear after every 3 years as screening test. There is 0.1% of intra-epithelial neoplasia (CIN) I or II if smear is typical. In inflammatory smear the opportunity of CIN II-III is 6%, with marginal atomic changes 20-30% with mild to moderate dyskaryosis 50-75% and for extreme dyskaryosis 80-90%.[9]

Frequency of anomalous cervical cytology in females with high equality and low socioeconomic status is 6% and in women age 41-60 year is 8.9%.[5] Other risk factors/ contributing factors associated with CIN are smoking 5.6% early age of first intercourse 30.4% and oral contraceptive usage 12.8%.[9]

CIN is known to be pre-cancerous stage of cervical CA and the factors contributing to development of CIN have been identified. There is disparity in previous studies regarding percentages of risk factors contributing to CIN. In one study, risk of CIN with increase parity is 38.4%[9] and in other it is 55.3%[6] oral contraceptive pills use is 12.8%[9] and in other study it is 6.3%[6]. Other risk factors like smoking, low socioeconomic status, age at first intercourse where not address properly. I want to summarize all the risk factors together in my study and on its basis current frequency of CIN and its contributing factors will be

calculated. In this way, I will able to update the frequency of CIN in our population. Frequency of CIN will held to devise new management strategies, so that cervical CA can be prevented by early identification and early treatment.

## PATIENTS AND METHODS

Study was done in Obstetrics & Gynaecology Out-Patient Department of M. Islam Medical College, Gujranwala and same cases analyzed in Histopathology Department of M. Islam Medical College, Gujranwala. All patients presenting in Gynae Outpatients Department, fulfilling the inclusion and exclusion criteria will be selected for study. Informed consent was taken regarding usage of their personal information for purpose of study. Detailed history regarding age, parity, marital status and gynaecological history especially abnormal vaginal discharge, irregular bleeding and post coital bleeding was taken. In every one of these patients cervical assessment with cuscosspeculaum was performed and pap-smear was obtain with Ayers spatula from transformation zone. The sample (exfoliated cells) was consistently spread more than two glass slides, fixed with 45% liquor (hair shower) and sent for cytology. All those women who have abnormality in PAP smear was subjected to colposcopy directed biopsy. Both the smear and tissue were analyzed in the pathology lab of M. Islam Medical College, Gujranwala. The outcome variable were age, CIN (I, II, III) and contributing factors (high parity, early marriage, low socioeconomic status, smoking and oral contraceptive pills).

## RESULTS

Patients distribution according to age shows 112(28%) cases between 20-30 years, 134(33.5%) between 31-40 years, 89(22.25%) between 41-50 years and only 65(16.25%) were between 51-60 years, mean was 38.54+5.33 years (Table 1). Parity distribution shows 89(22.25%) between 1-3 para, 248(62%) between 4-5 and only 63(15.75%) had >6 paras (Table 2). Frequency of cervical intraepithelial neoplasia reveals in 44(11%) while 456(89%) had no findings of the morbidity (Table 3).

We recorded frequency of contributing factors among diagnosed cases of cervical intraepithealial neoplasia i.e., 44(11%), high parity was recorded in 19(43.18%), 17(38.64%) had early marriage, 24(54.55%) had low socio economic status, 1(2.72%) had smoking history while 9(20.45%) were taking oral contraceptive pills (Table 4).

Table 1: Age distribution (n=400)

| Age ( years) | No. | % |
|---|---|---|
| 20-30 | 112 | 28 |
| 31-40 | 134 | 33.5 |
| 41-50 | 89 | 22.25 |
| 51-60 | 65 | 16.25 |
| Mean±Sd | 38.54+5.33 | |

Table 2: Distribution of patients according to parity (n=400)

| Para | No. | % |
|---|---|---|
| 1-3 | 89 | 22.25 |
| 4-5 | 248 | 62 |
| >6 | 63 | 15.75 |

Table 3: Frequency of **cervical intraepithelial neoplasia** (n=400)

| CIN | No. | % |
|---|---|---|
| Yes | 44 | 11 |
| No | 356 | 89 |

Table 4: Frequency of contributing factors for **cervical intraepithelial neoplasia** (n=44)

| Contributing factors | No. | % |
|---|---|---|
| High parity | 19 | 43.18 |
| Early marriage | 17 | 38.64 |
| Low socio economical status | 24 | 54.55 |
| Smoking | 1 | 2.72 |
| Oral contraceptive pills | 9 | 20.45 |

## DISCUSSION

Gynecological carcinomas are among the most well-known malignancies in woman[10]. Cervical carcinoma still keeps on being second commonest female cancer in around the world[11].

Frequency of carcinoma of cervix is 8.9/100000 women[12]. It represents for significant morbidity and mortality around the world, every year there are roughly 1500 passing in England and Wales from cancer of cervix[13]. Cancer of cervix has pre-malignant condition called CIN (cervical intraepithelia neoplasia). CIN may advance to invasive cancer over a time of 3 to 20 years in 70% patients[14]. Screening of premalignant cervical cancer with papanicolaou smear remains exceptionally successful and simple operation[15].

Papanicolaou smear is the establishment of cervical carcinoma screening[7]. It will identify 90% of cervical lesions[8]. Frequency of irregular cervical cytology is 6% in female with high parity and low financial status[9] 8.9% in young females 41-60 years and Para 3 or more[16]. Other risk factors for cervical cancer are (HPV), smoking, abnormal sexual behavior and genital tract infection. Incidence of different contributing risk factors was found to be inconsistent. However, we planned to summarize all the risk factors together in my study and on its basis current frequency of CIN and its contributing factors are calculated.

The results of the study shows 112(28%) cases between 20-30 years, 134(33.5%4) between 31-40, 89(22.25%) between 41-50 and only 65(16.25%) were between 51-60 years of age, mean was calculated as 38.54+5.33 years, 89(22.25%) between 1-3 para, 248(62%) between 4-5 and only 63(15.75%) had >6 paras, frequency of cervical intraepithelial neoplasia reveals in 44(11%) out of them 19(43.18%) high parity, 17(38.64%) early marriage, 24(54.55%) had low socio economic status, 1(2.72%) had smoking history while 9(20.45%) were taking oral contraceptive pills were recorded as contributing factors of the morbidity. Our findings regarding frequency of CIN is in agreement with Saleem and colleagues who revealed 9.4% cases showing positive smears[6].

A major risk factors of the morbidity is low socioeconomic status in our study contributing 54.55% of the cases, these findings are in agreement with a study done in California which demonstrating that low income young females were at higher risk of creating cervical carcinoma.[17] Smoking is a potential hazard factor for cervical cancer and it is built up that there is 12.7 fold risk of creating CIN after 12 years of smoking,[17] Jubelirer et al (1996) described that cervical carcinoma related with smoking was up to 40% of screened female populace.[18] our findings are in-contrast with this finding as we recorded only 1(2.72%), the reason behind this difference is unknown.

It was seen about parity that 19 out of 44(43.18%) patients who were diagnosed to have CIN had in excess of five children. In comparison to various studies which demonstrate that high parity is a risk factor for cervical neoplasia[19]. Early beginning of sexual movement is additionally a risk factor. It was found in this study that out of 44 patients of CIN 17(38.64%) females experienced early marriage (beginning of sexual activity). We observed these findings in concurrence with an examination indicating age from the first sexual intercourse under 18 years conveyed a high risk for developing CIN[20].

However, considering the findings in agreement with other studies, we updated the frequency of CIN in our population. Frequency of CIN will held to devise new management strategies, so that cervical CA can be prevented by early identification and early treatment[20].

## CONCLUSION

It is concluded that low socioeconomical status, higher parity and early marriage are the major contributing factors in diagnosed cases of cervical intraepithelial neoplasia in women attending Gynae OPD of tertiary care hospital.

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