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Dr. Shazia Nisar

Senior Resident, Department of
Obstetrics and Gynaecology,
Skims Soura, Srinagar, Jammu
and Kashmir, India

Dr. Shahid Bashir Banday

Senior Resident Department of
Pediatric Surgery, Skims Soura,
Srinagar, Jammu and Kashmir,
India

Corresponding Author:

Dr. Shazia Nisar

Senior Resident, Department of
Obstetrics and Gynaecology,
Skims Soura, Srinagar, Jammu
and Kashmir, India

A study on screening of carcinoma of cervix using Pap smear at a tertiary hospital

Dr. Shazia Nisar and Dr. Shahid Bashir Banday

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Abstract

Cancer cervix is most common carcinoma in developing countries back of lack of screening facilities but one in favour is it has a long preinvasive stage which if screened and treated can prevent further progression to invasive carcinoma.

Methodology: This study included 200 patients attending gynae OPD with chief complaints of discharge p/v., these patients were subjected to p/v and p/s and Pap smear was taken. Results of Pap smear were given as per Bethesda system and it was seen most common lesion was negative for intraepithelial followed by inflammatory. Which if treated can prevent progression to invasive cancer... Signifying importance of Pap smear.

Keywords: Cancer cervix, common carcinoma, gynae OPD

Introduction

Cancer cervix is fourth most cancer worldwide [1] While in India it ranks 2nd in number [2]. In India every year 1.2 lac Cases of cancer cervix are reported [1]. According to World cancer statistics >80% of cancer cervix cases are reported from developing countries because of lack of Screening programs [1]. The unique feature of cancer Cervix is that it has long and well defined Precancerous lesion, therefore early detection and treatment is possible if routine screening is implemented [3]. There are actually changes in cellular morphology which can be Koilocytes, cellular dysplasia and cellular neoplasia [4]. Persistent Infection with high risk HR-HPV is the main risk factor for development for cancer cervix. Screening tests for cervical cancer look at dysplastic changes at in epithelial cells(cervical cytology), morphological changes in cervix due to Cervical intra epithelial neoplasia CIN, (visual inspection of acetic acid VIA, visual inspection of lugols iodine VILI) or at causative organism Human papilloma virus DNA (HPV _DNA). Association of HPV-DNA increases sensitivity for early diagnosis of precancerous lesions [5]. Cervical cytology can be done on glass slide or liquid based cytology. Pap Smear was discovered by Mr George Papanicolou in 1943. It examines cells from transformation zone for cellular and nuclear changes along with end cervical smear with a cytobrush. Need of hour is to educate women regarding Symptoms of cancer cervix, need for screening programs and motivate Women to visit hospital for screening purpose. Pap smear positive women need regular follow up and treatment.

Methodology

This study included about 200 women attending gynae OPD of skims soura between January 2016-february 2017.

Inclusion Criteria

1. Women with 21 years of age to 65 years.
2. Sexually active women.

Exclusions criteria

1. Women <21 years
2. women not sexually active
3. women >65 years
4. pregnant women

It included women attending gynaecology OPD with chief complaints of white p/v discharge, postcoital bleeding, intermenstrual bleeding, postmenopausal bleeding and Pruritis vulvae. Proper consent was taken from women for Pap smear. Women were placed in lithotomy position and per speculum examination of cervix was done for visible ulcer erosion, bulky cervix, and white discharge. Agrees spatula was introduced and smear from ectocervix was taken by rotating it 360°. Another smear was taken from endocervix by using cytobrush. Fixation of slides was done by keeping them in fixative (95% ethanol) and handed over to department of pathology in skims soura. Laboratory results were reported according to new Bethesda system for reporting cervical cytology 2014 as following [6]

1. Negative for intra epithelial lesion/malignancy
2. Epithelial cell abnormalities
 - a) squamous cell abnormalities
 - b) Atypical squamous cells
 - c) Atypical squamous cells of undetermined significance (ASCUS)
 - d) atypical squamous cells can't rule out high grade (Asc-H)
 - e) Low grade squamous intra epithelial lesion(LSIL)
 - f) High grade squamous intra epithelial lesion(HSIL)
 - g) Squamous cell carcinoma
 - h) Glandular cell abnormalities
 - i) atypical squamous cells specify site of origin if Possible
 - j) atypical glandular cells favour neoplasia
 - k) Adenocarcinoma in situation
3. non neoplastic findings
4. Endometrial cells in women >45 years of age
5. other malignant neoplasms

All women with abnormal Pap smear were sent for colposcopy, those with abnormal colposcopy we're directed to biopsy and treatment was given according to stage of disease.

Results

Table 1: Demographic profile

| Age in years | No. of women | Percentage |
|--------------|--------------|------------|
| 20-30 | 70 | 35% |
| 30-50 | 80 | 40% |
| 50-65 | 50 | 25% |

Table 2: Parity

| Parity | No. of women | Percentage |
|--------|--------------|------------|
| P1+0 | 20 | 10% |
| P2+0 | 30 | 15% |
| P3+0 | 60 | 30% |
| P4+0 | 90 | 45% |

Table 3: socioeconomic status

| Areas | No. of patients | Percentage |
|--------------|-----------------|------------|
| .Rural areas | 20 | 60% |
| Urban areas | 80 | 40% |

Table 4: Religion

| Religion | No. of patients | Percentage |
|----------|-----------------|------------|
| Hindu | 120 | 60% |
| muslim | 80 | 40% |

Table 5: Contraceptive use

| Contraceptive use | No. of patients | Percentage |
|-------------------|-----------------|------------|
| Barrier | 30 | 15% |
| IUCD | 50 | 25% |
| OCP | 80 | 40% |
| Ligation | 40 | 20% |

Table 6: Clinical presentation of patients attending OPD

| Symptoms | No. of patients | Percentage |
|------------------------|-----------------|------------|
| Asymptomatic | 30 | 15% |
| white discharge p/v | 70 | 35% |
| postcoital bleeding | 20 | 10% |
| Intermenstrua bleeding | 30 | 15% |
| postmenopausal bleed | 40 | 20% |
| pruritis vulvae | 10 | 5% |

Table 7: Finding of patients on p/s examination

| Condition of cx | No. of patients | Percentage |
|-------------------|-----------------|------------|
| normal cervix | 50 | 25% |
| white discharge | 90 | 45% |
| erosion | 40 | 20% |
| bulky cervix | 10 | 10% |
| ulcerative cervix | 10 | 10% |

Table 8: Results of pap smear

| Results | No. of patients | Percentage |
|--|-----------------|------------|
| negative for intra-epithelial lesion(NILM) | 86 | 43% |
| Inflammatory | 84 | 42% |
| ASCUS | 10 | 5% |
| ASC-H | 8 | 4% |
| LSIL | 7 | 3.5% |
| HSIL | 2 | 1% |
| squamous-cell Carcinoma | 2 | 1% |
| Glandular cell-abnormalities | 1 | 0.5% |

Discussion

Carcinoma cervix is second most carcinoma in India and its burden is especially more in rural where people are reluctant for screening and screening facilities too are meagre. Carcinoma cervix is preceded by pre malignant stage and it takes 10-15 years for frank carcinoma to develop. Pap smear is directed to detect such precancerous lesions at early stage so that early diagnosis and treatment can be instituted. Risk factors for carcinoma cervix are multiparty, chronic infection with human papilloma virus 16, 18, 31, 33, 45, 58 Immunodeficiency, STD'S, long term oral contraceptive use [7]. The most Common age group in our study with abnormal pap smear was 30-50 years, while as in study by Gupta *et al.* [8] most common age group was 30-39 and in study by vaghela *et al.* [9] common age group was 49 years. In our study abnormal pap-smear was mostly seen in multi paras (>p4), it was more in rural areas and in Hindu community because of lack of circumcision in Hindu community. In our study the most common complaint was white p/v discharge (45%) This is similar to studies [10, 11]. Pap smear screening if done every 3 yearly mortality due to carcinoma Cervix can be reduced by 80% [12]. Results of Pap smear can be seen as below: NILM (negative for intra epithelial lesion) was seen in 43% of patients, inflammation was seen in 42% of patients, and LSIL (low grade squamous intraepithelial lesion) was seen in 3.5%. High grade squamous intra epithelial lesion (HSIL) was seen in 1% of patients while as study by Atilgan R *et al.* [13] and kulkarni PR *et al.* [14] report inflammation in of patients and 74.5% of patients respectively. Inflammation is caused mostly by human papilloma virus so it needs treatment and repeat smear after 3 months. Persistent inflammation if not treated will lead to FIND(15, 16) In our study ASCUS was seen in 5%, ASC-H in 4%, LSIL in 3.5% and HSIL in 1%. Study done by Verma *et al.* [17] reported ASCUS in 1% LSILSQUAMOUS in 5.5% and HSIL in 2.5% of women. In our study squamous cell carcinoma (SCC) in 1% and glandular abnormalities in 0.5%. In study by sunita *et al.* [18] ASCUS is

seen in 2.3%, LSIL in 1.9%, HSIL in 0.3%, SCC in 0.5% while in study by Nayer *et al.* [19] ASCUS was seen In 1.7%, ASC-H in 0.2%, LSIL in 0.5%, HSIL 0.1%. This difference in Pap smear abnormalities in different studies is because Of differences in age, parity, literacy and awareness towards screening programmes.

Conclusion

Carcinoma cervix is a preventable disease because it has a long Latent period of 5-10 years from pre invasive lesion to full blown carcinoma Screening programs can detect these pre invasive lesion and prevent development of invasive disease. It is therefore mandatory to educate women regarding utility of screening programs through media, educational programs and in OPD.

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