

Original research article

To assess the cervical dysplasia in relation to socio-demographic and various environmental risk factors**Sobia Akram****Senior Resident, Department of Obstetrics and Gynaecology, Narayan Medical College and Hospital, Jamuhar, Sasaram, Bihar, India.****Received: 02-07-2020 / Revised: 03-08-2020 / Accepted: 26-08-2020****Abstract****Aim:** To assess the cervical dysplasia in relation to socioeconomic status and various environmental risk factors.**Material and methods:** A prospective study was conducted in the Department of obstetrics and gynaecology, Narayan Medical College and Hospital, Jamuhar, Sasaram, Bihar, India from Sept 2017 to Nov 2018. Total 100 Married women who have pre and post-menopausal age group were included in this study.**Results:** The maximum age incidence of dysplasia has been found in the age group 20-30 years 40 % and followed by 30-40 years 24% and above 50 years we found only 4 %.The incidence of cervical dysplasia was higher in women of lower socioeconomic status, 75% cases were found in low and low middle income group. Though the percentage positivity of cervical dysplasia was higher in lower socioeconomic group but it was not statistically significant from the other two socioeconomic groups. A high incidence is noted in those who are illiterate (46%) and followed by up to 8th standard and 12th standard and only 3 were graduate. Incidence of dysplasia high in rural 65% and 35% in urban area and most of these women were married before the age of 20 years. Out of 100 cases; 82 % were from Hindu patients while 13% belonged to Muslims and 5% cases were from other religion. The dysplasia was more in smokers (60%) as compared to non-smokers (40%), but the difference was not statistically significant. As the number of patients were very few who smoked, the association of smoking with dysplasia cannot be predicted. Incidence of mild dysplasia was 62 % followed by 26 % Moderate dysplasia and 12 % Sever dysplasia. The most common symptoms was vaginal discharge was present in 67% patients followed by backache and pain abdomen 8%, Menstrual complaint 7%, Intermenstrual bleeding 6% and Post-menopausal bleeding Postcoital bleeding, Pruritus vulva vagina.**Conclusion:** Dysplasia is a neoplastic precursor of invasive disease. It is important to identified the high risk population and suggest social measure to motivate and educate women for a positive attitude towards cancer consciousness to make the screening program useful for prevention cervical dysplasia.**Keywords:** Cervical dysplasia, socioeconomic, risk and environmental

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Introduction

Cervical dysplasia is a disordered growth of the epithelial lining of the cervix¹. It is the precancerous condition of the cervix which may progress to cervical cancer over a period of time, in an average of 10–15 years^{2,3}. Cervical dysplasia especially the low-grade lesion regresses spontaneously in a significant number of patients,

allowing for expectant management with serial cytologic smears, whereas the high-grade lesions will progress to an invasive cancer if left untreated^{2,3}. The prevalence of cervical dysplasia varies according to the socioeconomic characteristics and geographic area of the population studied, from as low as 1.05% in some family planning clinics to as high as 13.7% in women attending sexually transmitted disease (STD) clinics¹. Prevalence rates of 9.3% and 12% were found among the women screened in STD and family planning clinics of the University College Hospital (UCH), Ibadan respectively^{4,5}. Cervical dysplasia is mostly detected in women in their 20th year, the peak incidence of carcinoma *in situ* being in women

Correspondence*Dr. Sobia Akram**

Senior Resident, Department of obstetrics and gynaecology, Narayan Medical College and Hospital, Jamuhar, Sasaram, Bihar, India.

E-mail: sobiaakram10@gmail.com

aged 25–35 years, while the incidence of cervical cancer rises after the age of 40 years¹.

Cervical cancer is a global burden, and it is the most common cause of preventable cancer related death especially in developing countries like Nigeria^{2,3}. The incidence of cervical cancer has reduced remarkably in developed countries where there are effective, well-coordinated screening programs, and prompt treatment of cervical dysplasia. However, this incidence has been on the increase and has constituted major health problems among women in developing countries where there are no well-coordinated and effective screening programs. There have been a lot of postulations about the predisposing factors for developing cervical cancer. It has been established to be a sexually transmitted infection, since it is commonly found in women who have had human papillomavirus (HPV) infection^{3,6-9} and in those with multiple sexual partners or those whose spouses have multiple sexual partners. It has also been linked with human immunodeficiency virus,¹⁰ poverty,¹¹ cigarette smoking,⁸ multiparity, and use of oral contraceptive pills, especially when it was used for more than 12 years¹². Cervical cancer screening is an important component of the World Health Organization (WHO) strategy for combating cancer^{2,13}. Available evidences indicate that cervical cancer screening programs have been effective in developed countries where a significant reduction in the incidence of and mortality from cervical cancer has been observed over the last three decades¹⁴. The WHO recommends that in low-income countries every woman should be screened at least once in her lifetime between the ages of 35 and 40 years^{2,13}.

The cost effectiveness of this is greater in countries with higher rates of cervical cancer and those with identifiable high-risk groups^{2,13}. Even where effective screening programs exist, there is ignorance of such^{2,5,14}. The WHO recommendation, therefore, is for the development of national cancer strategies based on surveillance and prevention programs tailored to local needs¹³. However, an organized screening program is difficult to implement in developing countries where resources are scarce^{2,3}. There are few if any, cytological screening programs in most developing countries, including Nigeria and coverage is insufficient to have an impact^{6,15,16}. In these countries, screening is mostly done in the context of opportunistic activities, which are often inadequately performed^{3,15,16}. It is estimated that some 40–50% of women in developed countries have been screened for cervical dysplasia by the year 1988 compared to 5% of women in developing countries^{2,3,14}. The best weapon against gynaecological cancer in early diagnosis. The use of papanicolau technique of screening of cervical

cancer appropriate intervention is a simple, well recognized and appreciated method of early diagnosis¹⁷. High risk population for the screening of cervical dysplasia and neoplasia – multiple sexual partner, women who start sexual life early before 21 years increases with rate of STD, low socioeconomic status, occupation, education, black, poor and uneducated population.

Material and Methods

A prospective study was conducted in the Department of obstetrics and gynaecology, Narayan Medical College and Hospital, Jamuhar, Sasaram, Bihar, India from sept 2017 to November 2018.

Methodology

Total 100 Married women who have pre and post-menopausal age group were included in this study. Women in reproductive age group, pre and post-menopausal age group-Name, husband name, age, religion, community, rural/urban, occupation of both husband and wife, education, income, marital life, menstrual history, obstetric history, personal history, smoking, tobacco, past and family history. Menstrual and other gynaecology complaints were recorded with particular attention to the amount, colour and type of vaginal discharge. General and systemic examination of all system. Vaginal examination: Prior to gynecological examination a speculum examination was done and vaginal and cervical smear were taken and fixed vaginal discharge were noted, the condition of cervix and vagina observed.

Three important investigations have been done

1. Cervical smear examination in all cases
2. Colposcopic examination
3. Cervical biopsy

Results

The maximum age incidence of dysplasia has been found in the age group 20-30 years 40 % and followed by 30-40 years 24% and above 50 years we found only 4 %. The incidence of cervical dysplasia was higher in women of lower socioeconomic status, 75% cases were found in low and low middle income group. Though the percentage positivity of cervical dysplasia was higher in lower socioeconomic group but it was not statistically significant from the other two socioeconomic groups. A high incidence is noted in those who are illiterate (46%) and followed by up to 8th standard and 12th standard and only 3 were graduate. Incidence of dysplasia high in rural 65% and 35% in urban area and Most of these women were married before the age of 20 years. Out of 100 cases; 82 % were from Hindu patients while 13% belonged to

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dysplasia was more in smokers (60%) as compared to non-smokers (40%), but the difference was not statistically significant. As the number of patients was very few who smoked, the association of smoking with dysplasia cannot be predicted. Incidence of mild dysplasia was 62 % followed by 26 %Moderate

dysplasia and 12 %Sever dysplasia .the most common symptoms was vaginal discharge was present in 67% patients followed by Backache and pain abdomen 8%, Menstrual complaint 7%, Intermenstrual bleeding 6% and Post-menopausal bleeding Postcoital bleeding, Pruritus vulva vagina.

Table 1: Demographic Profile of patients

Age group (yrs)	Total case=100	Grades of dysplasia		
		Mild	Moderate	Severe
Below 20	17	8	6	3
20-30	40	24	12	4
30-40	24	11	5	8
40-50	15	5	8	2
Above 50	4	2	1	1
Area				
Rural	65	35	18	12
Urban	35	15	14	6
Religion				
Hindu	82	39	27	16
Muslim	13	8	4	1
Skin	5	3	1	1
Christian	0	0	0	0
Education status				
Illiterate	46	20	14	12
Up to 8 th	30	14	12	4
Up to 12 th	13	8	3	2
Undergraduate	8	6	2	0
Graduate	3	2	1	0
Income				
Low	39	14	16	9
Middle	36	22	10	4
High	25	14	6	5
Marital life				
0-5	3	2	1	0
5-10	7	5	1	1
10-15	20	12	6	2
15-20	29	15	12	2
20-25	13	6	3	4
>25	28	10	9	9
Total	100	50	32	18

Table 2: Classification of smear according to various grade of dysplasia

Grade	No. of cases	%
Mild dysplasia	62	62
Moderate dysplasia	26	26
Sever dysplasia	12	12

Table 3: Symptoms

Symptoms	No=100
Vaginal discharge	67
Backache and pain abdomen	8
Menstrual complaint	7
Intermenstrual bleeding	6
Postcoital bleeding	4
Pruritus vulva vagina	3
Post-menopausal bleeding	5

Discussion

Diagnosis of dysplasia in the present studies in mainly only cytological examination, pap's smear has been done in every case, histopathological examination is suspicious cases and colposcopic examination in a selected few cases^{18,19}. The maximum age incidence of dysplasia has been found in the age group 20-30 years. Babarinsa et al. in 1998 found a demonstrable increase in the incidence of cervical carcinoma, particularly among women above 30 years of age²⁰. There was a significant association between age and prevalence of abnormal cervical cytology ($P = 0.01$). Age is an important factor because the chances of a woman developing dysplasia increases with increasing age. The mean age for developing dysplasia and carcinoma in situ ranged from 34.7 to 38.6 years and 39.6 to 43.5 years, respectively. The incidence of cervical dysplasia was higher in women of lower socioeconomic status, 75% cases were found in low and low middle income group. The majority of the women with abnormal cervical cytology smears were living above the poverty line which was different from the known association of abnormal cervical cytology with poverty²¹. It has been documented earlier that cancer is common in low socioeconomic class in whom the component of poverty, overcrowding, inadequate food, and poor personal hygiene are contributing factors. The increased risk with low socioeconomic status is attributed to a lack of screening, failure to treat precancerous conditions, and lack of knowledge about prevention of human papillomavirus (HPV) infection²². In our study, an inverse relation with socioeconomic status was observed as also in other studies.

A high incidence is noted in those who are illiterate (46%) and followed by up to 8th standard and 12th standard and only 3 were graduate^{23,24}. Incidence of dysplasia high in rural 65% and 35% in urban area and most of these women were married before the age of 20 years. The high incidence seen in tobacco chewing women (65%). Cervical malignant growth is a significant medical issue around the world, being the second most normal disease among ladies, positioning

first in many creating nations; about 82% of absolute cases are available in creating nations²⁵. It was once, one of the most widely recognized reasons for malignant growth demise. Throughout the most recent 30 years, the cervical malignant growth passing rate has gone somewhere around over 50.0% for American ladies²⁶. The principle explanation behind this change was the expanded utilization of the Pap test.

A large number of workers^{27,28} found smoking as one of the major risk factor. In our study, dysplasia was found to be slightly more frequent in smokers as compared to nonsmokers, but statistically the difference was not significant. As regards association of smoking with dysplasia, it is very difficult to comment upon as the number of smoker females were too less in this study. The role of circumcision and carcinoma of cervix has been emphasized by a large number of workers in the past²⁹⁻³¹ who reported carcinoma cervix to be more common in Hindus than in any other religion. The increase in cervical cancer awareness in this study over that found by Ajayi and Adewole in the same clinic in 1998 emphasized the importance of health education in the cervical cancer prevention program³². As with any hospital-based studies, the limitations of this study were financial constraint limiting the number of subjects recruited for the study and also the prevalence of cervical dysplasia and associated risk factors identified may not fully represent those in the community

Conclusion

Dysplasia is a neoplastic precursor of invasive disease. It is important to identified the high risk population and suggest social measure to motivate and educate women for a positive attitude towards cancer consciousness to make the screening program useful for prevention cervical dysplasia.

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