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Incidence of cervical intraepithelial neoplasia in antenatal women by screening: A study in a semi urban area

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Abstract

Background: The cervical cancer is often said to occur in the low socio-economic conditions present in the countries where facilities for planning, obstetric health and gynecological health conditions are poor with almost no cervical screening programmes.³ In India, the cervical cancer is that the commonest of all cancers in women and has known to account for 16% of them. a number of the risk factors stated are multiple sexual partners, early age at the primary coitus, or partner with multiple sexual partners.

Materials and methods: This study was conducted by the department of Gynaecology at a Private hospital over a time period of two year. 900 antenatal patients attending the Gynecology OPD were randomly selected for the study and the patients with excessive and active vaginal bleeding, draining of liquor, excessive vaginal discharge, women with frank lesions on the cervix were excluded from the study. The informed consent letter was obtained by the patients. Information regarding their obstetric and gynaecological condition and the marital status were recorded.

Results: The overall mean age of the women in the study was around 25 years. The mean age at the time of menarche was around 14 years and at the time of marriage was approximately 22 years. On Pap smear, 55.5% of the 900 cases were normal, with inflammation seen in 350 (38.88%) of the cases. 28 patients (3.11%) had squamous metaplasia.

Conclusion: There is a low incidence of cervical intraepithelial neoplasia in our study. Early detection of the same can lead to a proper and efficient treatment with conservative management so as to not affect the growing fetus as well as the mother and it is also imperative to educate the women the symptoms of the disease as well as the practices that can lead to it along with the prevention.

Keywords: Gynecological Health, Cervical Intraepithelial Neoplasia, Cervical Squamous Epithelial, Obstetric

Introduction

Cervical intraepithelial neoplasia, also referred to as dysplasia or cervical squamous epithelial lesions may be a premalignant cervical disease which will cause cervical cancer ^[1, 2]. The incidence varies from country to country with almost 80% seen within the developing countries. The cause for this is often said to be the low socio-economic conditions present in these countries where facilities for planning, obstetric health and gynecological health conditions are poor with almost no cervical screening programmes ^[3]. In India, the cervical cancer is that the commonest of all cancers in women and has known to account for 16% of them. A number of the risk factors stated are multiple sexual partners, early age at the primary coitus, or partner with multiple sexual partners ^[4]. It's said to be the second commonest cancer among the ladies with an estimated death rate of 231000 to 500000 new cases once a year ^[2]. The screening of the cervical cancer includes the screening of cervical cytology and testing for oncogenic human papilloma viruses (HPV) since most of the precursor lesions appear within the women of child bearing age ^[5, 9]. Pap smear (papanicolaou) is one among the foremost common and simple method of screening especially within the non-symptomatic case of early cervical neoplasia Colposcopy and cervical biopsy with Papanicolaou smear is typically included within the diagnosis ^[10]. So, the aim of this study was to evaluate the incidence of cervical intraepithelial neoplasia in antenatal women.

Materials and methods

The present study was conducted by the department of Gynaecology at a Private hospital over a

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Time period of two year. 900 antenatal patients attending the Gynecology OPD were randomly selected for the study and the patients with excessive and active vaginal bleeding, draining of liquor, excessive vaginal discharge, women with frank lesions on the cervix were excluded from the study. The informed consent letter was obtained by the patients. Information regarding their obstetric and gynaecological conditions and the marital status was recorded. Age at first coitus, methods of contraceptives used, history of multiple sexual partners of the women or spouse, were also noted. After a general, physical examination, clinical examination was done. Macroscopic abnormalities were noted. A cervical smear was made and immediately fixed. After fixing, they were stained with pap stain. Then the incidence of lesions through smear reports, noted. Colposcopy, colposcopic directed biopsy and conisation were also performed if needed.

Results

Majority of the women were in the age group of 20-30 years in the study group. Very few of them were in the adolescent age group that is 17.77% (Table 1). The overall mean age of the women in the study was around 25 years. The mean age at the time of menarche was around 14 years and at the time of marriage was approximately 22 years. On Pap smear, 55.5% of the 900 cases were normal, with inflammation seen in 350 (38.88%) of the cases. 28 patients (3.11%) had squamous metaplasia and dysplasia was seen in 2 patients (0.2%). 7 (0.77%) of the patients in our study had low grade squamous intra epithelial lesion, while 5 patients (0.55%) had high grade squamous intra epithelial lesion with one case each showing CIN III and CIN II grading and 1 with CIN I. (table-3)

Table 1: Age wise distribution of the patients

Age	Number	Percentage
15-20 years	160	17.77
21-25 years	550	61.11
26-30 years	150	16.6
30-35 years	40	4.44

Table 2: Bench marks ages of the patients

Benchmark	Age
Mean age at menarche	15±2.2
Mean Age	24.4±4.2
Mean age at marriage	23±4.6

Table 3: pap smear results

Features	Number	Percentage
Normal	500	55.5
Inflammation	350	38.88
Squamous metaplasia	28	3.11
Dysplasia	2	0.2
Chronic cervicitis	5	0.55
LSIL	7	0.77
HSIL	5	0.88
CIN I	1	
CIN II	1	
CIN III	1	

LSIL= Low grade squamous intra epithelial lesion, HSIL= High grade squamous intra epithelial lesion, CIN = Cervical intraepithelial neoplasia

Discussion

It has been observed that the case of cervical cancer has

increased in young women between 20-30 years old within the past few years [11]. This has been attributed to the rise within the increased rate of human papilloma viral infection and therefore the increased age of the primary child birth. Cervical cytospin is usually recommended as an element of routine examination for pregnant women for screening for abnormal cervix. Predisposition towards cervical cancer is also the young age of the patient at her first sexual encounter and multiple sexual partners. Polygamy is reported to extend the danger of cervical cancer by two folds [12]. A spouse with multiple partners is additionally known to be a risk factor for the event of human papilloma virus, which is one in every of the most causes of cervical cancer [13]. The mean age in our study was 23.6±4.3 years, with the foremost predominant cohort being 21.25 years. The mean age at menarche was 14±2.7 and at the time of marriage was 22±4.9. During a study by Schiff et al, the mean age was 27.6 year with women having but high school of education. The mean age of the primary intercourse for these women was 16.9 years [14]. Within the present study, the incidence of CIN was 2.7%. during a study by Al-Halal in 2012, the incidence of CIN was observed to be 1.3-2.7%, HGSIL type changes undergo spontaneous regression during confinement from 48- 70% [15, 16]. In another study the prevalence if CIN was around 12% out of which HSIL was seen in 2% of the cases [12]. During a retrospective study on post coital bleeding by Rosenthal *et al.*, 12 out of 314 cases showed invasive cancer out of which 10 were cervical [17]. d'Ottaviano- Morelli reported an HSL (both CIN II and CIN III) positivity on 396 patients out of 100000 [18]. A retrospective study by Rosenthal et al of 314 women with post coital bleeding (PCB) showed 12 cases of invasive cancer (3.8%): ten were cervical or vaginal cancers and two endometrial cancers. Eight out of the ten cervical /vaginal cancers were clinically apparent. Four of those ten had normal smears before being referred for further investigation of PCB [19]. Low rates of progression are observed in various studies during pregnancy, while other studies have observed postpartum regression rates of 37 – 74% of CIN [20-24]. The limitation of our study was the low number of CIN patients to grant a correct evaluation of the progression of the disease. The extent of information among the abnormal smear patients was 32 to 40% regarding the cause and symptoms of neoplasia or cervical cancer while the treatment was known to majority of them. During a similar study in Nigeria, the symptoms and cause was known to 25% of the patients, while during a study in Lagos, 20% of the patients knew about this disease [12, 25].

Conclusion

There is a low incidence of cervical intraepithelial neoplasia in our study. Early detection of the same can lead to a proper and efficient treatment with conservative management so as to not affect the growing fetus as well as the mother and it is also imperative to educate the women the symptoms of the disease as well as the practices that can lead to it along with the prevention

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