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Dr. Dipnarayan Sarkar
Assistant Professor (G&O). Department of Obstetrics and Gynaecology. IPGME&R and SSKM Hospital Kolkata, West Bengal, India

Dr. Sarbeswar Mandal
Assistant Professor (G&O), Department of Obstetrics and Gynaecology. IPGME&R and SSKM Hospital Kolkata, West Bengal, India

Correspondence
Dr. Sarbeswar Mandal
Assistant Professor (G&O), Department of Obstetrics and Gynaecology. IPGME&R and SSKM Hospital Kolkata, West Bengal, India

One year papanicolaou (PAP) smear study in a tertiary care centre

Dr. Dipnarayan Sarkar and Dr. Sarbeswar Mandal

Abstract
Background: Among the all gynecological cancer, cervical cancer is an important women's health problem worldwide in low socioeconomic countries including India. Morbidity and mortality could be significantly reduced by an active Pap smear screening program. Aims and objective of this study to raise public awareness on the need for cervical screening. To improve overall coverage of target population.
Method: A total 4000 married women complaining of white discharge were included in our study. The women were asked for the presence of known risk factor of cancer cervix such as socioeconomic background, early sex, early marriage, high parity, smoking, multiple sex partners, partner having multiple sex partners. Smear were taken in gynecological outdoor and examined by the pathologists of IPGME&R/SSKM, Kolkata.
Results: Among the participant over 96% had never heard of pap smear screening before. Abnormal Pap smear was found in 6.9% of cases. Significance category were ASC (.6%), L-SIL (4.I%), H-SIL(.93%%), biopsy proved SCC(.55%), inflammatory smear 39.5% and 33.1% were normal.
Conclusion: The frequency of epithelial cell abnormalities in our study was almost same the frequency reported from Western countries and also from other studies of India. To evaluate the magnitude of the problem, unified National program for diagnosis cervical precancerous lesion should be established all over the country.

Keywords: papanicolaou, precancerous, cancer cervix, screening, ayer's spatula, pap smear, human papilloma viruses

Introduction
This year an estimated 13240 women in the United States will be diagnosed with cervical cancer. Incidence rate for the disease dropped by 50% between 1975 and 2014 due to an increase in screening (1). Cervical cancer is the second most common cancer in women worldwide. An estimated 493,000 new cases and 274,000 death occurred from cervical cancer in each year all Over the world (2). In India average 1.5 lakh women suffer from cervical cancer in each year as new case, among them 75000 women die due to the complication of cancer cervix.

This cytological based screening programs had drastically reduced cancer incidence to 9 /100000 women in develop countries (3). Cervical cancer screening. In India is very low, only 2.8% women aged 21 to 60 years screened every 3 years (4). However, in India a national population-based Pap smear screening program is difficult to implement because of logistic problems related to the need for laboratory facilities and expert cytologist.

Material and Methods
This study carried out among 4000 married women between 21 to 60 years who visited the gynecological outdoor in IPGME&R. We involved all women who attended the outdoor during the period of September 2017 to August 2018 for the complaining of white discharge. Antenatal mother, Pelvic Inflammatory disease, cervicitis, hysterectomy, any type of cancer, menorrhoegia and irregular bleeding are excluded from this study. Collection of pap smear was taken from the ectocervix by Ayers spatula and endocervix by cyto brush. The material was smeared on glass slide and kept in kop lip jar with absolute alcohol. Pathologists of pathology Department stained the glass slide with papinicolaou stain and examined under light microscope. Cytological examination of cervical cell was done according to modified Bethesda system 2001.

Results & Analysis
In this programmed total 4000 women were selected for Pap smear. Socio-demographic characteristics were, most of the participant 99.3% reported that they had one sexual partner

Throughout the life. There educational status was recorded (Table 1). Various risk factors obtained from the women were also recorded, among them early sex 3442 participants and early marriage,3356 participants were the most common (Table 2). Epithelial abnormalities were 24 case (.6%) of atypical squamous cells (ASC), 164 cases (4.1%) of Low grade squamous intraepithelial lesion (L-SIL), 36 cases (95%) of High grade squamous intraepithelial lesion (H-SIL), and 22 cases (55%) of squamous cells carcinoma. Reactive cellular changes associated with inflammation (inflammatory smear) was found in 39.8% of cases sown in (Table 3).

Table 1

Age group	Illiterate	Primary school	Class Ten	High Secondary	Graduated	Pap knowledge
21-30	0.7	31	4.6	4.1	3.2	3.1
31-40	2.3	10.7	3.8	3	2.3	1.2
41-50	5.6	7.9	2	0.9	1.1	0.8
51-60	6.2	6	1	0.8	0.8	0.1
Total	14.80%	55.60%	11.40%	9.80%	7.40%	5.20%

Table 2

Age group	Number	Early sex	Early marriage	High parity	Multiple sex partner	Smoking	Oral contraceptive user
21-30	563	424	403	95	5	4	97
31-40	1743	1599	1645	511	13	11	402
41-50	1442	1428	1321	678	17	17	48
51-60	252	193	198	203	6	2	5
Total	4000	3644	3567	1487	41	34	552

Table 3

Age group	Normal	Inflamatory	ASC	L-SIL	H-SIL	SCC	TV	BV	Candida	Atrophy
21-30	520	616	2	14	1	0	162	22	221	0
31-40	478	549	4	68	21	11	107	14	113	2
41-50	206	272	10	56	12	8	126	6	118	6
51-60	120	143	8	26	4	3	21	2	54	10
Total	1324	1580	24	164	38	22	410	44	506	18
%	33.1	39.5	0.6	4.1	0.95	0.55	10.25	1.1	12.65	0.45

[ASC: atypical squamous cell,L-SIL: low grade squamous intraepithelial lesion, H-SIL: high grade squamous intra epthelial lesions, SCC: squamous cell carcinoma, TV; trichomonas vaginalis, BV: bacterial vaginalis.

Table 4

N=248	Early sex	Early marriage	High parity	Multiple sex Partner	smoking	Oral contraceptiv	Family h/o cancer
ASC(n=24)	8(p<0.0001)	9(P<0.0001)	6(p=0.0004)	3(p=0.02))	0(p=1.00)(NA)	5(P<0.0001)	2(P=0.01)
L-SIL(n164)	92(p<0.0001)	108(P<0.0001)	60(P<0.0001)	11(P=0.0040)	0(p=1.00) (NA)	24(p<0.0001)	12(p<0.0001)
H-SIL(n=38)	21(p<0.0001)	26(P<0.0001)	10(P<0.0001)	4(P=0.002)	6(p<0.0001)	6(p<0.0001)	11(p<0.0001)
SCC(n=22)	15(p<0.0001)	12(=<0.0001)	13(P<0.0001)	8(p<0.0001)	4(p<0.0001)	2(p=0.01)	3(p=0.0004)
Total=248	136	155	175	107	28	37	28

Fisher's Exact Test (FET), Two-Tailed P Value (TTPV).

Discussion

In developed countries the Pap test was successful in reducing the incidence of cervical cancer by 78% and mortality by 70% [3]. In a hospital based study done by Behera SR *et al* the incidence of abnormal epithelial smear was 7.4% which is higher than our study. The reason may be that our study was done only white discharge patient [3]. In our study the majority of pap smears were evaluated as reactive cellular changes (36%), followed by infection (20%). Similar result were obtained from Firat P; *et al* and Uncurl R; et, other two hospital base studies: 45% reactive cellular changes and 13% infection [5]; 23.4% reactive cellular changes and 30.6% infection [6].

Cervical cancer screening, U.S Preventive service Task and Saslow D *et al* are recommended usually started three years or more after first sex or age 21 to25 [8]. Recommendation from M, Arbyn *et al.*

Risk factor for cervical cancer are as follows [9]: early sex; high parity; tobacco smoking; multiple sex partner; and long term (more than 5 years) use of oral contraceptives. All are statistically high significant (p<0.0001), except tobacco smoking because Indian women are not habituated with smoking.

In our study, 94.8% participants reported that they had not heard about Pap smear before. In previous two studies Akyuz A *et al* and Mehmetoglu HC *et al* shown that 70.3% and 90.7% participants had not heard Pap smear testing before [10].

Conclusion

India is one of the large populated country in world. Large number of people is in low socioeconomic status, they are poorly educated and they are unaware about the risk of early marriage. Due to inadequate infrastructure in developing country like India, screening to all married women will be more difficult, it is better to screen all married women with white discharge from vagina to detect early cancerous change of cervix. Knowledge regarding cervical Pap smear is very poor among the Indian women. Motivation, counseling and awareness to be increased in Indian women.

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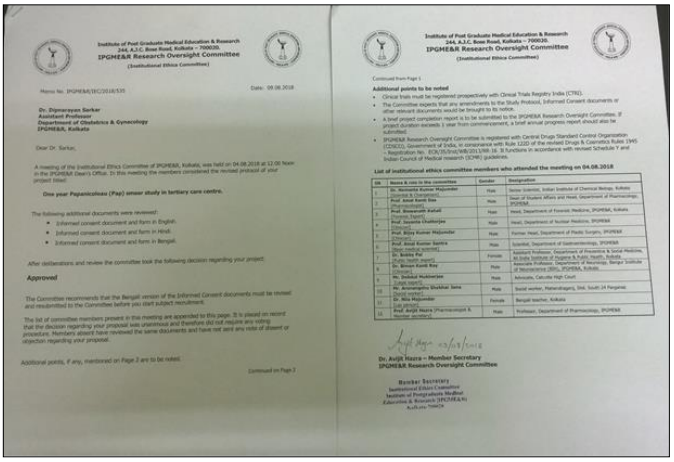

Fig 1

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