SCREENING FOR EARLY CARCINOMA OR DYSPLASIA CERVIX BY PAP SMEAR

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ABSTRACT

Screening for early carcinoma or Dysplasia cervix by Pap smear .Out of total 500 patients dysplasia was seen in 9.6%, majority of dysplasia was seen in the age group of 31-40 years (5.6%) and 1.2% of dysplasia was seen in the age groups of 41-50 years age groups. In total number of 500 patients screened for Pap smear, 73.2% of women had inflammatory smears, 7.6% and 2.4% had atypical/mild dysplasia and dysplasia respectively. In view of more number of hysterectomies done for erosion of cervix, the incidence of unnecessary operative interventions can be reduced and also we can decrease the incidence of cervical malignancy by screening large number of population by training health workers.

KEYWORDS : Dysplasia, Pap Smear, Cervical Malignancy

Cancer cervix is the most common malignancy in women in India, worldwide around 524000 new cases of cancer cervix were detected in the year 1995. Developing countries, it is often the most common cancer among women accounting 80% of cases (Park Text Book).

According to WHO 1999 global incidence of annual estimates of new cases of cervical cancers were 200, 000, among them 125,952 were in India (Kennath d, Novak's Text Book of Gynecology).

Cells that are normally exfoliated are collected in the posterior fornix. These cells originate from vaginal epithelium membrane, portiovaginalis of cervix, endocervical canal and uterine endometrium. By collecting these cells and studying these after appropriate staining one can accurately diagnose the various physiological and pathological states (Cheryl et al., 2000).

Cervical carcinoma is preceded for many years by cervical dysplastic changes or cervical intraepithelial neoplasia CIN. Non invasive lesion which is quiescent may activate in future, may proliferate may become malignant. These dysplastic changes can be detected earlier by various screening methods (Shaw's Text Book of Gynecology).

In Indian women in rural areas are of low socioeconomic status, illiterate. Early marriages and multiparity are making them more prone for development of cervical cancer. They cannot gain access and approach to referral centers for cumbersome cervical cancer screening methods like Pap smear.

This inspired me to take up this study to increase detection rate of cervical dysplasia with the objective i.e screening for early carcinoma or Dysplasia cervix by Pap smear.

MATERIALS AND METHODS

The present Prospective randomized control trials study was undertaken among women aged between 25 65 years outpatient's department of gynecology in Vijayanagar Institute of Medical Sciences (VIMS) Bellary. The study was undertaken during January 2007 to June 2008. Permission for the study was obtained from the College authorities prior to commencement.

Sample Size

500 women aged between 25 65 years were taken in the study.

Inclusion Criteria

Age 25 65 years, history of persistence white discharge resistance to treatment, history of irregular bleeding or post coital bleeding, erosion or thickened white epithelial areas, and cytologically smears reported us inflammatory or dysplasia.

Exclusion Criteria

Age group below 25 and above age 65, cases where obvious invasive carcinoma or visible cervical mass, all pregnant women puerperal women, recently aborted women, Active lower genital tract infection

Data Collection Method

The objectives and methodology of the study were explained to those women who were included in the study. Apparently 500 women of those aged between 25-65 years who voluntarily willing for the examination were taken in this study. Willing patients were enrolled into the study information is obtained us for the proforma. Women coming for testing should have the screening procedure explained to them in detail. After explaining the procedure and taking

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Table 1 : Age Wise Distribution of Dysplasia by Pap Smear Report

Age (yrs)	No of patients	Mild dysplasia	Moderate dysplasia	Severe dysplasia	Total dysplasia	%)
25-30	190	9	0	3	12	2.4
31-40	210	15	8	5	28	5.6
41-50	75	0	6	0	6	1.2
50-65	25	0	2	0	2	0.4
Total	500	24	16	8	48	9.6
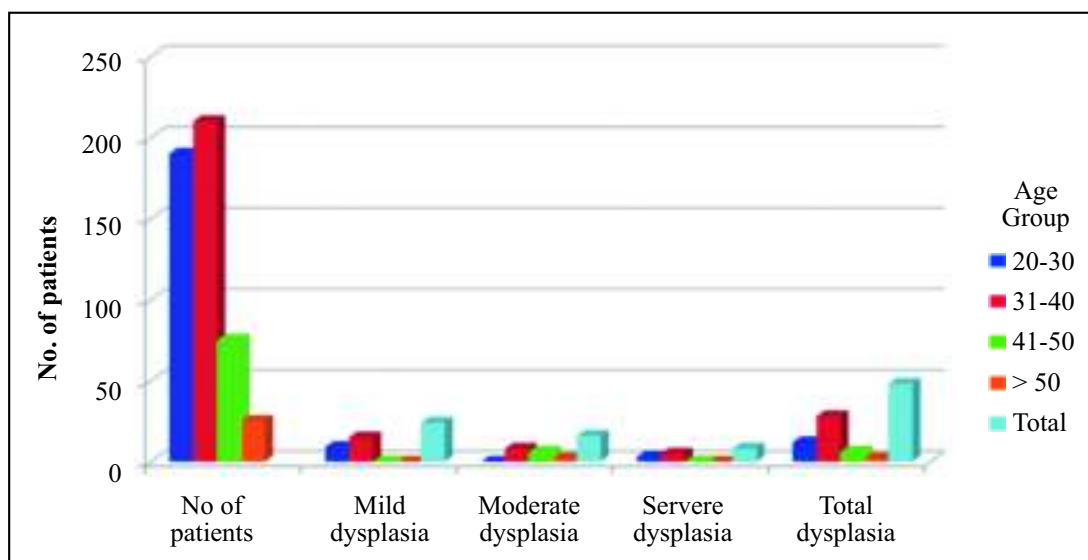
Graph 1 : Age Wise Distribution of Dysplasia By Pap Smear Report

informed consent, every effort made to ensure that she is fully relaxed and remains at ease during testing. The women is asked to lie down in a dorsal position and observe the external genitalia, perineal region for any excoriations, edema, vesicles, papules, sores, ulceration and warts.

The Cusco's speculum gently introduced and opened and the ectocervix examined. Pap smear was taken by scraping of cells from ectocervix by Ayre's spatula and endocervical smear by cotton tipped applicator. Smear was made by spreading on a glass slide and fixed in a coplin jar containing isopropyl alcohol.

Data Analysis

Data collected was entered in Microsoft Office Excel and analyzed by using SPSS version 13.0. Dependent variable frequencies, percentage, were calculated.. The differences were considered as significant at a p value of<0.05.

RESULTS

Results of data have been showed in table 1-4 and graph 1 and 2. Out of total 500 patients dysplasia was seen in 9.6%, majority of dysplasia was seen in the age group of 31-40 years (5.6%) and 1.2% of dysplasia was seen in the age groups of 41-50 years age groups.

In total number of 500 patients screened for Pap smear, 73.2% of women had inflammatory smears, 7.6% and 2.4% had atypical/mild dysplasia and dysplasia respectively.

The sensitivity of pap smear test is 38.10 with its 95% confidence interval 25 to 53.19. Specificity is 98.69% with its 95% confidence interval of 97.17 to 99.4. The positive predictive value is 72.73 with 95% confidence interval of 51.85 to 86.85. The negative predictive value is 94.56% with its 95% confidence interval of 92.15 to 96.26. The diagnostic accuracy of the test is 92% with its 95% confidence interval of 86.25 to 96.57.

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Table 2 : PAP Smear of Study Subject

PAP Smear Report	No of Patients	Percentage (%)
Normal	84	16.8
Inflammatory	366	73.2
Atypical cells/Mild Dysplasia	38	7.6
Moderate/severe Dysplasia	12	2.4
Total	**500**	**100**

Graph 2 : PAP Smear of Study Subject
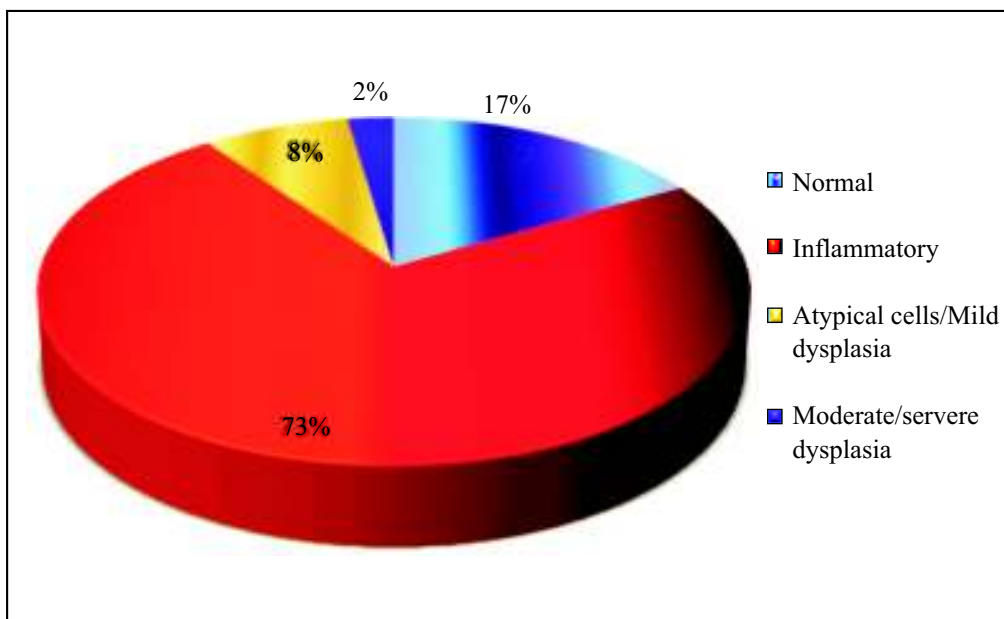
Table 3 : Diagnostic Values of Pap Smear Test and Its 95% Confidence Interval Values

Diagnostic Values	Values in Percent	95% Confidence Interval
Sensitivity	38.10	25 to 53.19
Specificity	98.69	97.17 to 99.4
Positive Predictive Value	72.73	51.85 to 86.85
Negative Predictive Value	94.56	92.15 to 96.26
Diagnostic Accuracy	92	86.25 to 96.57

Table 4 : Epithelial Abnormalities in Relation to Age of Patient by Pap Smear by Other Studies

Name of the Study	Age Group	% of Dysplasia
Padmanabhan et al	31-40years	33%
Pankaj Desai et al	31-40years	40%
Present study	31-40years	42%

Screening test	Name of the Study	Incidence
Pap smear	Bhatla et al	5%
	Sankarnarayanan et al	2.8%
	Present study	2.4%

DISCUSSION

In the present study, majority of patients having dysplasia, 42% by cytology belong to age group of 31-40years. In a study conducted by Pankaj Desai et al 40.5% women belongs to age group of 30-40 years.

The detection rate of dysplasia by Pap smear is 2.4% and that of Schiller's test is 4.8%. In the study conducted by Dr Sankarnarayanan et al (2003) detection rate was 2.8% for cytology and 2.9% for Schiller's test. This reveals that Schiller's test is equally effective and detects 2.4 % more cases than pap smear (Sankaranarayanan and Wesley, 2003).

From the present study the cytology based screening is not feasible in many developing countries in view of considerable financial, technical and man power resources required for organizing such program. Visual inspection based screening is currently being evolved as a potential alternative to conventional cytology in the early detection of cervical neoplasia in low resource settings.

In view of more number of hysterectomies done for erosion of cervix, the incidence of unnecessary operative interventions can be reduced and also we can decrease the incidence of cervical malignancy by screening large number of population by training health workers (Bhatla et al., 2007; Pddmanabhan et al., 1990).

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