

Correlation of PAP Smears with the Cervical Biopsy for Screening Carcinoma Cervix in and Around Mangadu



Medical Science

KEYWORDS : Pap smear,cervical cancer, Inflammatory smear,Histopathology.

Dr.K.R.Umadevi

Associate Prof, Dept of Pathology, Sri Muthukumaran Medical College Hospital and Research Institute,Chikkarayapuram,Near Mangadu, Chennai- 600069,Tamilnadu,India, Affiliated to Tamilnadu Dr.MGR Medical University, Guindy campus

ABSTRACT

Introduction: Cervical cancer is a cancer arising from the cervix. It is due to the abnormal growth of cells that have the ability to invade or spread to other parts of the body. Early on there are typically no symptoms. Later symptoms may include: abnormal vaginal bleeding, pelvic pain or pain during sex. Aim: To evaluate the frequency of accurate diagnosis from Pap smears. Materials and Methods : A total of 500 Pap smears and their corresponding Cervical biopsies over a 2 years period is included in the study.

Materials and Methods: A total of 500 cases over a period of 2 years were included in the study. Cytological and Histopathological studies were performed for all the cases.

Results: Age ranges from 21 years to 65 years with a mean age of 43 years. Majority of the patients fall in the category of Inflammatory smear where as few were in Malignant category.

Inflammatory lesion was present in 287 cases. Features of Dysplasia were observed in 138 cases and 20 cases were frankly malignant. Atrophic changes were seen in 40 cases, where as 15 cases were normal.

Conclusion: Inflammation of the Genital tract was a common Pathology. Pap smears and Cervical biopsy is a valuable tool for Screening of malignancy which can be done easily with low cost, outcome of malignancy can be prevented by early detection of malignancy in the cervix.

Introduction:

Scientists study screening tests to find those with the fewest risks and most benefits. Cancer screening trials also are meant to show whether early detection (finding cancer before it causes symptoms) decreases a person's chance of dying from the disease. For some types of cancer, the chance of recovery is better if the disease is found and treated at an early stage

Studies show that screening for cervical cancer helps decrease the number of deaths from the disease.

Regular screening of women between the ages of 21 and 65 years with the Pap test decreases their chance of dying from cervical cancer.

A Pap test is commonly used to screen for cervical cancer.

A Pap test is a procedure to collect cells from the surface of the cervix and vagina. A piece of cotton, a brush, or a small wooden stick is used to gently scrape cells from the cervix and vagina. The cells are viewed under a microscope to find out if they are abnormal. This procedure is also called a Pap smear. A new method of collecting and viewing cells has been developed, in which the cells are placed into a liquid before being placed on a slide. It is not known if the new method will work better than the standard method to reduce the number of deaths from cervical cancer. **After certain positive Pap test results, an HPV test may be done.**

An HPV TEST is a laboratory test that is used to check DNA or RNA for certain types of HPV infection. Cells are collected from the cervix and DNA or RNA from the cells is checked to find out if there is an infection caused by a type of HUMAN PAPILLOMA VIRUS that is linked to cervical cancer. This test may be done using the sample of cells removed during a Pap test. This test may also be done if the results of a Pap test show certain abnormal cervical cells. When both the HPV test and Pap test are done using cells from the sample removed during a Pap test, it is called cotesting.

Both the Pap test and the HPV test may be used in women aged 30 and older.

Screening women aged 30 and older with both the Pap test and the HPV test every 5 years finds more cervical changes that can lead to cancer than screening with the Pap test alone.

Screening with both the Pap test and the HPV test lowers the number of cases of cervical cancer.

Materials and Methods

A total of 500 cases over a period of 2 years were included in the study. Age ranges from 21 years to 65 years with a mean age of 43 years. **Pap smear**

The Pap smear is a screening test for cervical cancer. Cells scraped from the opening of the cervix are examined under a microscope. The cervix is the lower part of the uterus (womb) that opens at the top of the vagina.

How the Test is Performed

You lie on a table and place your feet in stirrups. The doctor or nurse gently places an instrument called a speculum into the vagina to open it slightly. This allows the doctor or nurse to see inside the vagina and cervix.

Cells are gently scraped from the cervix area. The sample of cells is sent to a lab for examination.

Cervical biopsy is done for all cases and sent to Histopathology Lab

The risks of cervical cancer screening include the following:

Unnecessary follow-up tests may be done.

In women younger than 21 years, screening with the Pap test may show changes in the cells of the cervix that are not cancer. This may lead to unnecessary follow-up tests and possibly treatment. Women in this age group have a very low risk of cervical cancer and it is likely that any abnormal cells will go away on their own.

False-negative test results can occur.

Screening test results may appear to be normal even though cervical cancer is present. A woman who receives a false-negative test result (one that shows there is no cancer when there really is) may delay seeking medical care even if she has symptoms.

False-positive test results can occur.

Screening test results may appear to be abnormal even

though no cancer is present. Also, some abnormal cells in the cervix never become cancer. When a Pap test shows a false-positive result (one that shows there is cancer when there really isn't), it can cause anxiety and is usually followed by more tests and procedures (such as colposcopy, cryotherapy, or LEEP), which also have risks. The long-term effects of these procedures on fertility and pregnancy are not known.

The HPV test finds many infections that will not lead to dysplasia or cervical cancer, especially in women younger than 30 years.

When both the Pap test and the HPV test are done, false-positive test results are more common.

Your doctor can advise you about your risk for cervical cancer and your need for screening tests.

Studies show that the number of cases of cervical cancer and deaths from cervical cancer are greatly reduced by screening with Pap tests. Many doctors recommend a Pap test be done every year. New studies have shown that after a woman has a Pap test and the results show no sign of abnormal cells, the Pap test can be repeated every 2 to 3 years.

The Pap test is not a helpful screening test for cervical cancer in the following groups of women:

- Women who are younger than 21 years.
- Women who have had a total hysterectomy (surgery to remove the uterus and cervix) for a condition that is not cancer.
- Women who are aged 65 years or older and have a Pap test result that shows no abnormal cells. These women are very unlikely to have abnormal Pap test results in the future.

The decision about how often to have a Pap test is best made by you and your doctor.

Age distribution

Age in Years	21 to 30	31 to 40	41 to 50	51 to 65
	152	136	146	66

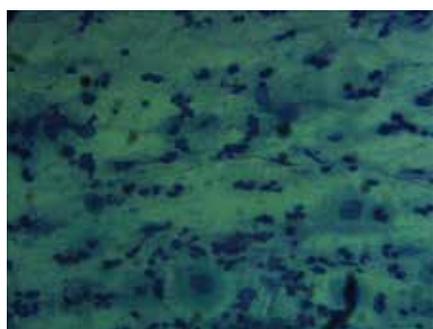


Fig-1 Inflammatory Smear

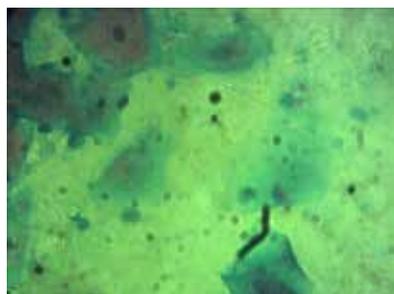


Fig-2 Inflammatory Smear showing Candida positive

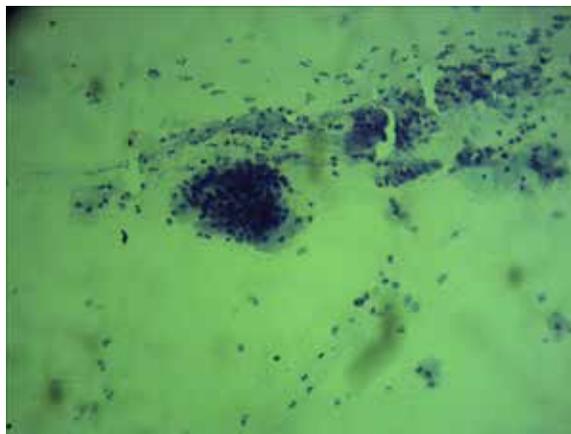


Fig-3 Pap smear-Atypical Squamous Cells of Undetermined Significance-ASCUS

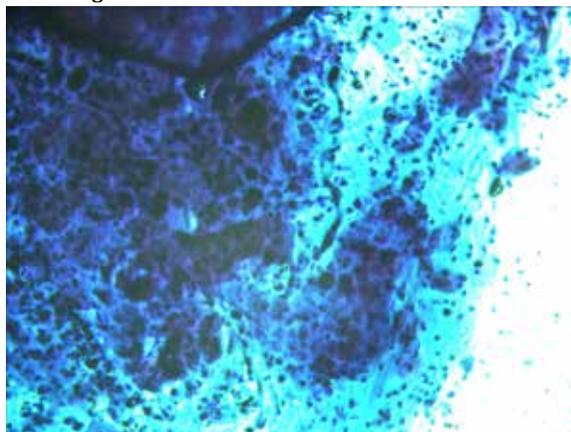


Fig-4 Pap smear showing Highgrade Squamous Intra epithelial Lesion-HSIL

PAP Smears Interpretation

Trichomonas Vaginalis	Candida	Bacterial Vaginosis	Infl smear	Normal	ASCUS	LSIL	HSIL	CA	Atrophic smear
45	62	28	152	15	72	42	24	20	40

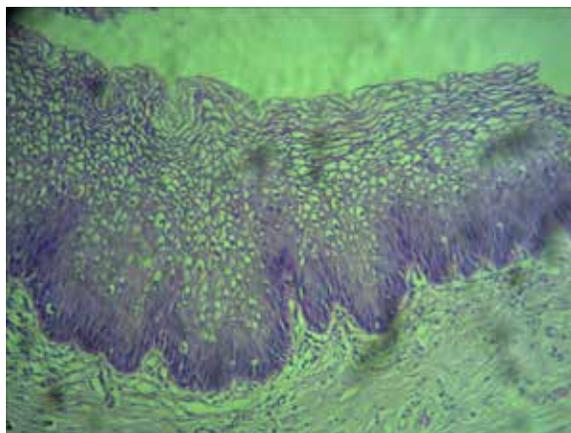


Fig-5 - CIN-1 Showing Koilocytotic change

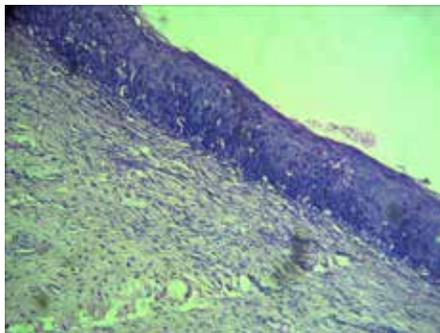


Fig -6 CIN-3 or Carcinoma in Situ

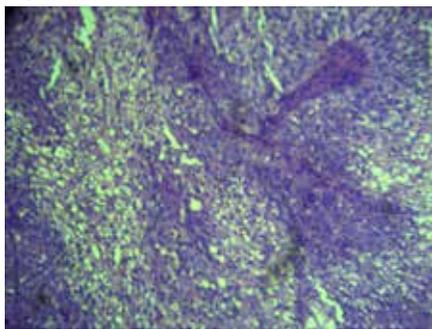


Fig-7 Carcinoma Cervix

Discussion

The Pap smear is a screening test for cervical cancer.[1] Most cervical cancers can be detected early if a woman has routine Pap smears.

Screening should start at age 21.

After the first test:

- You should have a Pap smear every 3 years to check for cervical cancer.[2]
- If you are over age 30 and you also have HPV testing done, and both the Pap smear and HPV test are normal, you can be tested every 5 years. (HPV is the human papillomavirus, the virus that causes genital warts and cervical cancer.)
- Most women can stop having Pap smears after age 65 to 70 as long as they have had three negative tests within the past 10 years

Normal Results

A normal result means there are no abnormal cells present. The Pap smear test is not 100% accurate. Cervical cancer may be missed in a small number of cases. Most of the time, cervical cancer develops very slowly, and follow-up Pap smears should find any changes in time for treatment.

What Abnormal Results Mean

Abnormal results are grouped as follows:

ASCUS or AGUS

- This result means there are atypical cells, but it is uncer-

tain or unclear what these changes mean

- The changes may be due to HPV
- They may also mean there are changes that may lead to cancer

LSIL (low-grade dysplasia) or HSIL (high-grade dysplasia):

- This means changes that may lead to cancer are present
- The risk of cervical cancer is greater with HSIL

Carcinoma in situ (CIS):

- This result most often means the abnormal changes are likely to lead to cervical cancer if not treated

Atypical squamous cells (ASC):

- Abnormal changes have been found and may be HSIL

Atypical glandular cells (AGC):

- Cell changes that may lead to cancer are seen in the upper part of the cervical canal or inside the uterus

When a Pap smear shows abnormal changes, further testing or follow-up is needed. [3] The next step depends on the results of the Pap smear, your previous history of Pap smears, and risk factors you may have for cervical cancer.[4]

For minor cell changes, doctors will recommend another Pap smear in 6 to 12 months.

Follow-up testing may include:

- Colposcopy directed biopsy[5]

An HPV test to check for the presence of the HPV virus types most likely to cause cancer

Human Papilloma Virus (HPV) infection appears to be involved in the development of more than 90% of cases. Most people who have had HPV infections; however, do not develop cervical cancer.[6] Other risk factors include: smoking, a Weak Immune System, birth control pills, starting sex at a young age and having many sexual partners, but these are less important. Cervical cancer typically develops from precancerous changes over 10 to 20 years. There are a few types of cervical cancer. About 90% are squamous cell carcinomas, 10% are adenocarcinoma and a small number are other types. Diagnosis is typically by cervical screening followed by a biopsy. Other risk factors include: smoking, a Weak Immune System, birth control pills, starting sex at a young age and having many sexual partners, but these are less important. Cervical cancer typically develops from precancerous changes over 10 to 20 years. There are a few types of cervical cancer. About 90% are squamous cell carcinomas, 10% are adenocarcinoma and a small number are other types. Diagnosis is typically by cervical screening followed by a biopsy.

Conclusion:

A worthwhile screening test requires a balance between the sensitivity and specificity to ensure that those having a disease are correctly identified as having it and those without the disease are not identified as having it. Thus cotesting of PAP and HPV Testing are useful tools to screen for Cancer Cervix

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