

**A COMPARATIVE DIAGNOSTIC VALIDITY OF TWO COLPOSCOPIC INDICES-
REIDS INDEX AND SWEDE SCORE WITH CERVICAL HISTOLOGY**

By Dr. LAVINIYA. N

Registration no: 221916057

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M.S. (OBSTETRICS & GYNAECOLOGY)

BRANCH-II



GOVERNMENT STANLEY MEDICAL COLLEGE

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Dr. P. BALAJI MS, FRCS, FCLS,PHD

Dean,

Govt Stanley Medical College,

Chennai.

Dr. V.RAJALAKSHMI,MD,DGO

Professor / Head of the Department

Dept. Of Obstetrics & Gynaecology,

Govt Rsrn Lying In Hospital,

Govt Stanley Medical College,

Chennai.

CERTIFICATE BY THE GUIDE

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Dr.THANGAMANI,M.D.OG.,

ASSOCIATE PROFESSOR,

DEPARTMENT. OF OBSTETRICS & GYNAECOLOGY,

GOVT. R.S.R.M LYING IN HOSPITAL,

GOVT STANLEY MEDICAL COLLEGE,

Chennai - 1

DECLARATION BY THE CANDIDATE

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DR.N.LAVINIYA

M.S. PostGraduate(Obstetrics & Gynaecology)

DEPT. OF OBSTETRICS & GYNAECOLOGY

GOVT STANLEY MEDICAL COLLEGE,

CHENNAI











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PRINCIPAL INVESTIGATOR : DR N. LAVINIYA,
DESIGNATION : PG IN OBSTETRICS AND GYNAECOLOGY,
DEPARTMENT : DEPARTMENT OF OBSTETRICS AND GYNAECOLOGY,
GOVT. STANLEY MEDICAL COLLEGE.

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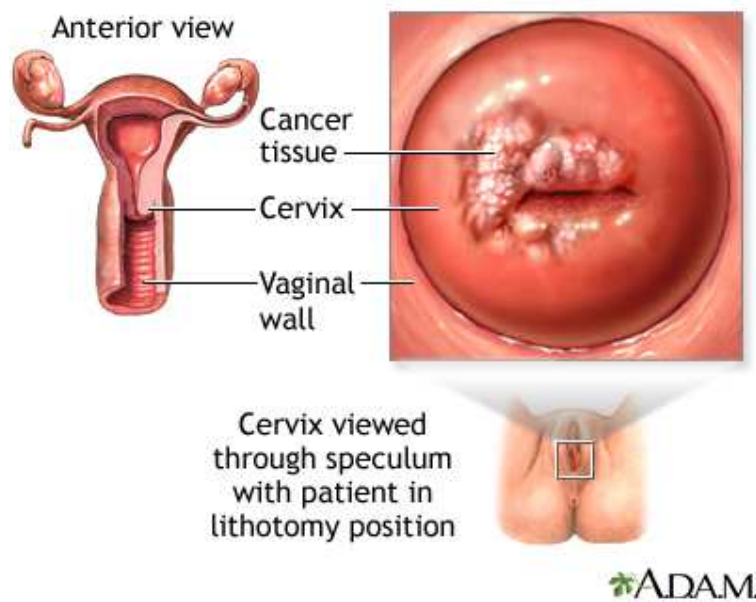
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LIST OF ABBREVIATIONS

S.NO	ABBREVIATION	
1.	CIN	Cervical Intraepithelial Neoplasia
2	SCJ	SquamoColumnar Junction
3	TZ	Transformation Zone
4	RCI	Reids colposcopic index
5	HPE	Histopathological examination
6	ECC	Endocervical curettage
7	VIA	Visual Inspection with Acetic acid
8	VIAM	Magnified visual inspection with acetic acid
9	VILI	Visual inspection with Lugols Iodine
10	ASCUS	Atypical squamous cells of Undetermined significance
11	LSIL	Low grade squamous intraepithelial lesion
12	HSIL	High grade Squamous Intraepithelial Lesion
13	AW	Acetowhite
14	ACS	American cancer society

INTRODUCTION

INTRODUCTION



Cancer of the cervix is the third most common cancer in women worldwide and the second most common cancer in India. The disease is preventable by screening and early diagnosis and treatment is associated with good outcome.

Cervical cancer constitutes 13% of all cancers in women globally. International data show a decline in incidence of cervical cancer in countries with successful programmes and early intervention.

It is a preventable disease because it goes through preinvasive stages for several years. Infection with human papilloma virus has been identified as a primary etiological factor in cervical cancer.

Prevention to be considered early.

Colposcopy is a highly useful screening technique which was invented by Dr.HansHinselmann in 1925.

Reid and Scuzzi proposed the scoring of REID to make an easy diagnosis.Stranded et al identified the correlation of size of the lesion and formulated a new scoring called SWEDE for benefit of easy diagnosis.

In this study,we are going to compare the SWEDE SCORE With REID INDEX And find the diagnostic validity of scores in comparison with cervical histology.

AIM OF THE STUDY

1. To do histopathological analysis of colposcopically directed biopsies.
2. To compare and correlate Colposcopy and cytology with histopathology.
3. To critically evaluate the sensitivity and specificity of Colposcopy indices reids vs swedes score in the early detection of high-grade lesions in cervix.
4. To perform direct excisional procedure as “see and treat” method at a specified cut off of the score which denotes high grade lesions.
5. To reduce the number of visits and follow ups for better compliance

REVIEW OF LITERATURE

History of Colposcopy

In 1925 German medico Hinselman together with a Leitz using a lamp and magnifying glass, invented Colposcopy and conducted studies on vulva, vagina and cervix, initiating the first Colposcopy clinic.

Walter Schiller in 1928, invented Schiller's test. He found that weak iodine solution would stain the glycogen in normal cervical squamous epithelium resulting in dark mahogany colour leaving areas of cancer unstained.

Sacks in 1934 complained that this equipment is cumbersome leading to non-acceptance of this method.

In 1956, Hinselmann experimented with video Colposcopy to identify cervical lesions. Navrratil indicated that by combining the cytology with Colposcopy, it was possible to increase the accuracy of early carcinoma detection by 99%.

Richart in 1967, introduced the term cervical intraepithelial neoplasia. Coppleson and Reid in 1967, described colposcopic indices for immature metaplasia in cervix

In 1970, StafI developed colposcopic terminologies. In 1971, British colposcopic group was formed. Coppleson, Pixely and Reid published their first edition of colposcopic text book and established the importance of transformation zone.

In 1975, IFCCP standardized the colposcopic terminologies and introduced international nomenclature for colposcopic findings causing rapid adoption of Colposcopy worldwide.

In 1984, Evaluation of cervical lesions by the combined use of cytology, Colposcopy and biopsy by Usha Saraiya and Maya Lulla at their Colposcopy clinic at Mumbai showed diagnostic rate of CA cervix in Colposcopy alone was 13% in non - suspicious group.

In 1988, Duggan et al, studied the natural history of CIN I lesions. De palo (Italy) in 1990, published a manual on Colposcopy and treatment of lower genital disease. Simmons in 1993 evaluated the role of smoking as a cause for cancer cervix, suggesting biochemical evidence with smoking modified the DNA in cervical epithelial cells leading to the development of cancer cervix.

In 1997, Gullota, Margarati and Rabihi studied the correlation among Colposcopy, cytology and HPE in the diagnosis of intraepithelial lesions of cervix. Sensitivity for detection of CIN was 70% with cytology and 92% with Colposcopy.

In 1998, Mitchel et al, did a meta-analysis in the role of Colposcopy for the diagnosis of CIN and found that average sensitivity of diagnostic Colposcopy with all grade cervical dysplasias was 96% and average specificity was 48%.

Feinstein et al in 1988, evaluated the pre and post-operative value of endocervical curettage (ECC) in the detection of CIN and invasive cancer and concluded that routine ECC should be a part of pre-operative assessment of an abnormal pap smear but may be unnecessary in the evaluation for residual dysplasia.

Belinson researched CA cervix screening by simple visual inspection with acetic acid and concluded that it was economically cost effective and technically simple. Cullimore, reviewed cytological reporting of abnormal glandular cells on cervical smears in order to assess the predictive value of these reports and the contribution of Colposcopy in the assessment of these cervix abnormalities.

Maiman in 1998, researched the prevalence, risk factors and the accuracy of cytologic screening for CIN in women with HIV and found that there was a high prevalence of abnormal cytology in CIN in HIV infected women.

Shalini et al, studied the cytologic, colposcopic and histopathological evaluation in patients with post coital bleeding and the sensitivity and specificity of cytology was found to be 56% and 90% respectively.

Olaniyan B., explained the validity of Colposcopy in the diagnosis of early cervical cancer and concluded that Colposcopy is a valid tool for the diagnosis of CIN. Its integral role in the management of early cervical cancer was justified.

Basu P.S and Sankaranarayan et al, studied the characteristics of VIA with 4% acetic acid and VILI in cancer cervix screening and estimated the sensitivity of VIA and VIAM to detect CIN 2-3 lesions were 55.7% and 60.7% respectively.

Etherington used video tele colposcopy to record colposcopic findings, which were subsequently transmitted to a specialist for interpretation. The sensitivity was found to be 88.9% and specificity was 93.3%.

Yarandi and colleagues studied the colposcopic and histologic findings in women with a cytologic diagnosis of ASCUS and concluded that ASCUS was a good marker for detecting SIL and condyloma.

Benedict J.L. did an analysis on 84244 patients from British Columbia by cytology and Colposcopy program and found that Colposcopy correlated with referral cytology within one degree in over 90% of cases and cytology histology correlation within one degree occurred in 82%.

PREVENTION OF INTRAEPITHELIAL NEOPLASIA AND CERVICAL CANCER:

PRIMARY PREVENTION:

Creating awareness about risk factors, promoting practice of safe sex, use of condoms to prevent STDs, lifestyle modifications, screening for and early treatment of premalignant lesions and HPV vaccines.

SECONDARY PREVENTION:

Prevention of progression of intraepithelial to invasive cancer. This includes screening and appropriate management of preinvasive lesions and followup.

SCREENING:

There is a lag time of 10-20 years before the disease progresses from intraepithelial to invasive disease. Several screening modalities are available.

SCREENING MODALITIES:

UNIVERSAL SCREENING METHODS:

CYTOLOGY

1. Conventional cytology(PAP SMEAR)

2. LIQUID BASED CYTOLOGY

MANUAL INTERPRETATION

AUTOMATED SCREENING

3. HPV Testing.

METHODS FOR LOW RESOURCE SETTINGS

1. VIA

2. VILI

3. POINT OF CARE HPV TESTING

CERVICAL INTRAEPITHELIAL NEOPLASIA

Classified into three grades-

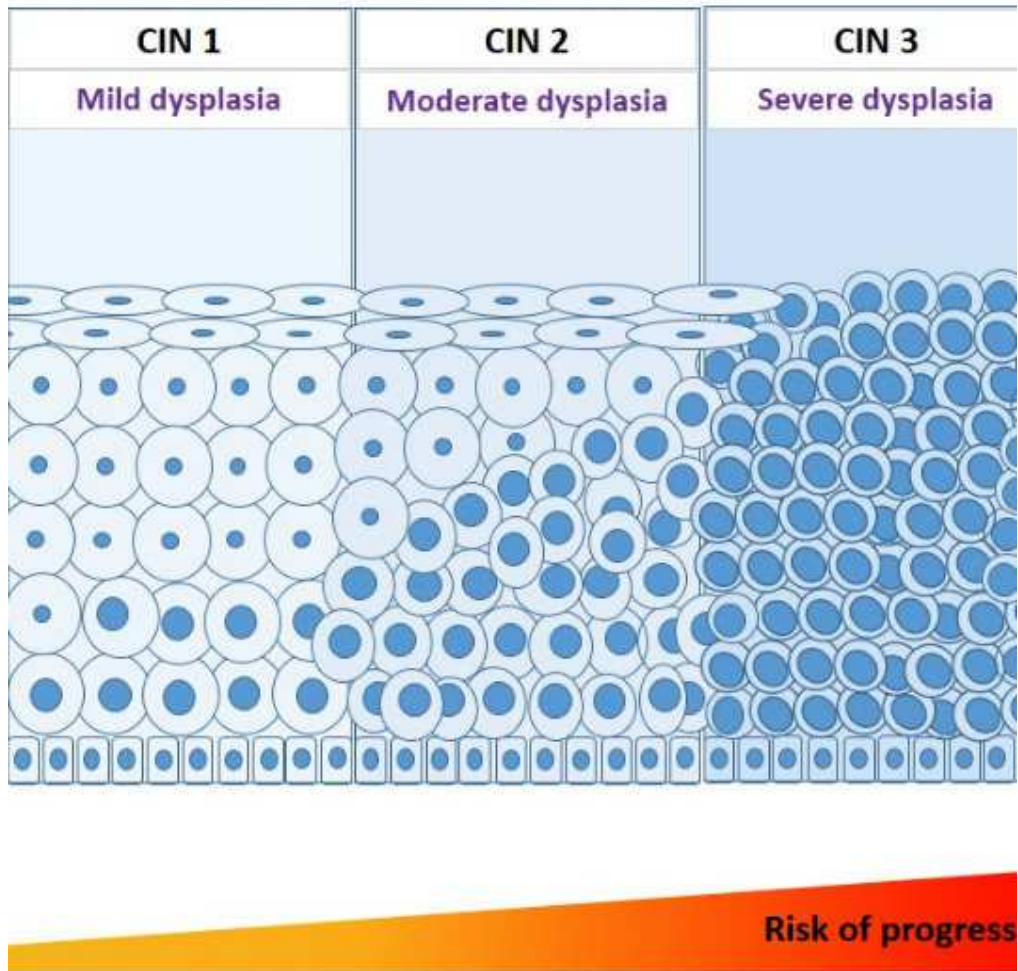


FIGURE 1: GRADES OF CIN

GRADES OF CIN

CIN I- Mild dysplasia- Histologically,atypical changes are limited to lower one third of epithelium

CIN II-moderate dysplasia atypical changes extend to middle third of epithelium

CIN III-Severe dysplasia atypical changes extend to entire thickness of epithelium

Progression from CIN I to III and invasive cancer was considered a process continuum

Further studies demonstrated that most CIN I regress and progression to invasive cancer occurs infrequently(1%).

CIN II and III,represent high grade lesions and are caused by persistent HPV infection and progression occurs more often(5% and 12%) respectively.

Therefore a two tier system was introduced for cytology and the terminology changes to low grade squamous intraepithelial lesion for CIN I and high grade intraepithelial lesion for CIN II and III.

TABLE 1: BETHESDA CLASSIFICATION

CIN	BETHESDA CLASSIFICATION
CIN I	LSIL
CIN II(p16 negative)	LSIL
CIN II(p16 positive)	HSIL
CIN III	HSIL

Screening



⊗

FIGURE 2: LSIL AND HSIL

ANATOMY OF CERVIX:

The cervix is composed of columnar epithelium, which lines the endocervical canal and squamous epithelium, which covers the exocervix. The point at which they meet is called the squamocolumnar junction.

ETIOLOGY AND PATHOGENESIS:

THE TRANSFORMATION ZONE:

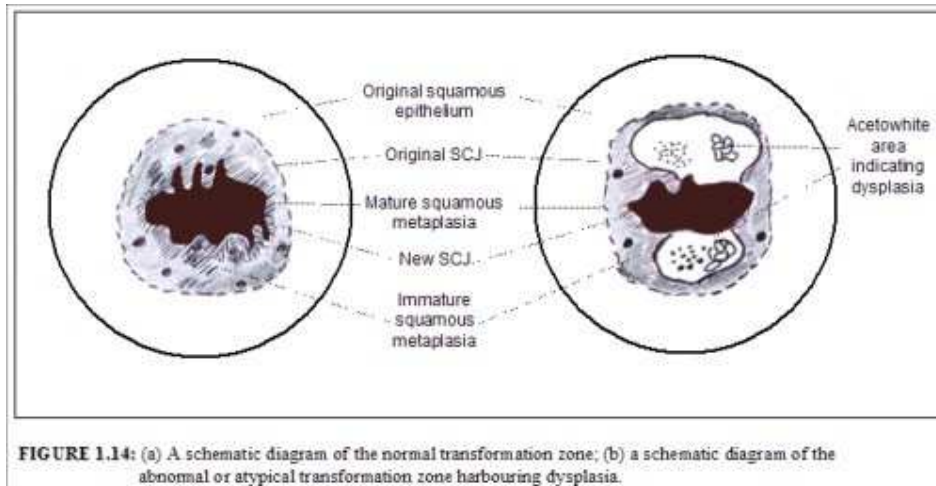
Most cervical malignancies occur in the region called the transformation zone(TZ).

At birth,SCJ located on the ectocervix and is called original SCJ. under the influence of estrogens in puberty and pregnancy, the endocervix everts to expose the columnar epithelium.

Glycogenization takes place and the lactobacilli colonize the epithelium and the pH becomes acidic.These changes stimulate columnar epithelium to undergo metaplasia and convert into immature squamous and later mature squamous. The junction between metaplastic squamous and columnar epithelium is known as new SCJ.The area between original and new SCJ called Transformation Zone.

This TZ is an area of high metaplastic activity and vulnerable to oncogenic effects of carcinogens

FIGURE 3: TRANSFORMATION ZONE



NORMAL TRANSFORMATION ZONE:

The BASAL LAYER is a single row of immature cells with large nuclei and a small amount of cytoplasm

The PARABASAL LAYER includes two to four rows of immature cells that have normal mitotic figures and provide the replacement cells for the overlying epithelium.

The INTERMEDIATE LAYER includes four to six rows of cells with large amounts of cytoplasm in polyhedral shape separated by an intercellular space. INTERCELLULAR BRIDGES, where differentiation of glycogen production occurs, can be identified with light microscopy.

The SUPERFICIAL LAYER includes 5 to 8 rows of flattened cells with small uniform nuclei and a cytoplasm with glycogen. The nucleus becomes pyknotic and the cells detach from the surface. These cells form the basis for pap testing more accurately known as CERVICAL CYTOLOGY.

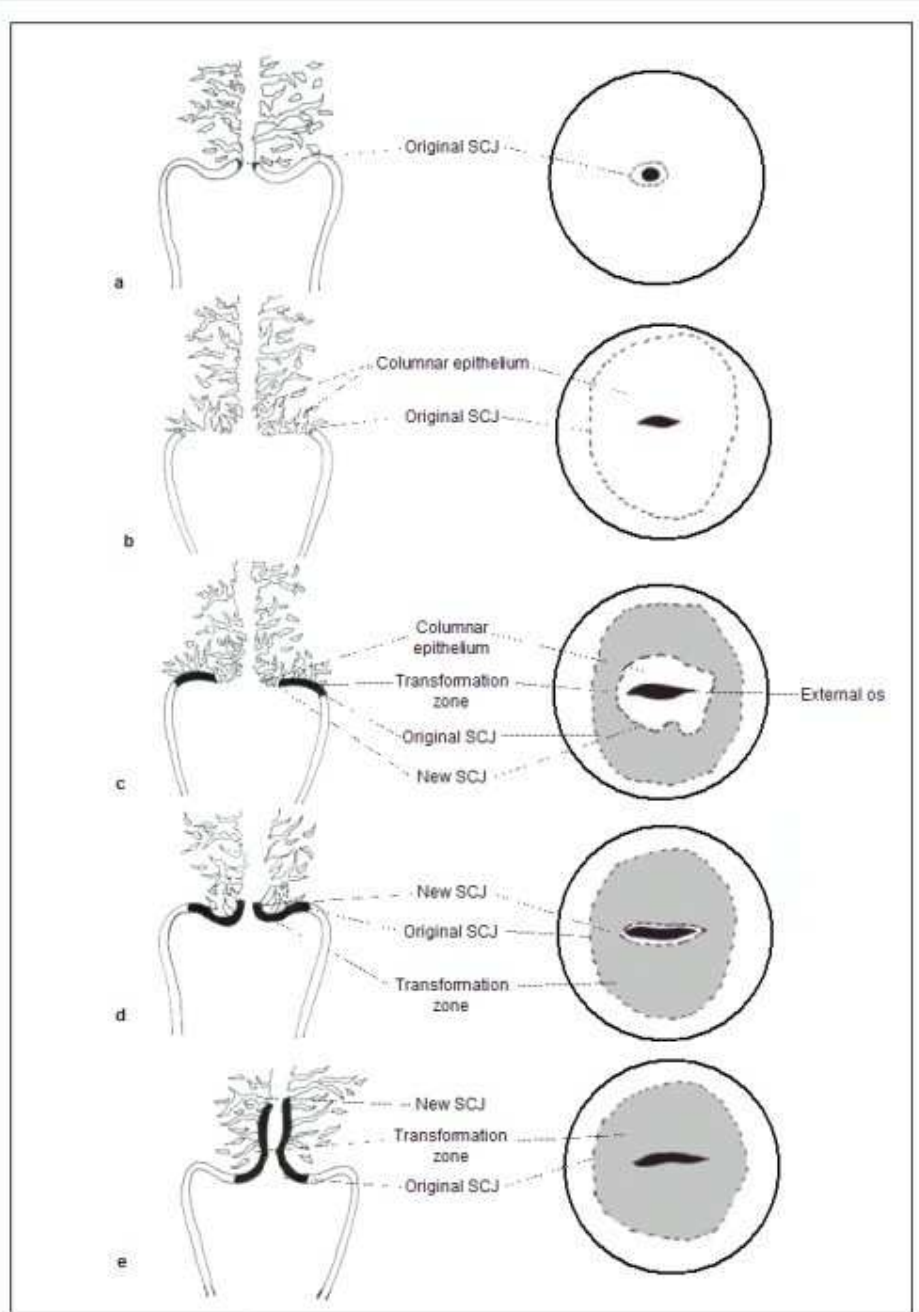


FIGURE 1.7: Location of the squamocolumnar junction (SCJ) and transformation zone; (a) before menarche; (b) after puberty and at early reproductive age; (c) in a woman in her 30s; (d) in a perimenopausal woman; (e) in a postmenopausal woman.

CERVICAL CARCINOGENS

1. Human Papilloma Virus

- HPV 16-Associated with CIN and HSIL
- HPV 18-Associated with adenocarcinoma
- HPV 31,33,35-Intermediate carcinogenicity.

2. Early sexual activity

3. Coitus with multiple sex partners

4. Sexually transmitted infections

- Herpes simplex
- Gonorrhoea, Chlamydia

5. Immunosuppression

- HIV infection
- Autoimmune diseases
- Hodgkin disease, leukemia
- Iatrogenic-Immunosuppressive drugs

6. Multiparity

7. Smoking

8. Combined OC Pills.

9. Deficiency of Vitamins A, C, E and Folic acid.

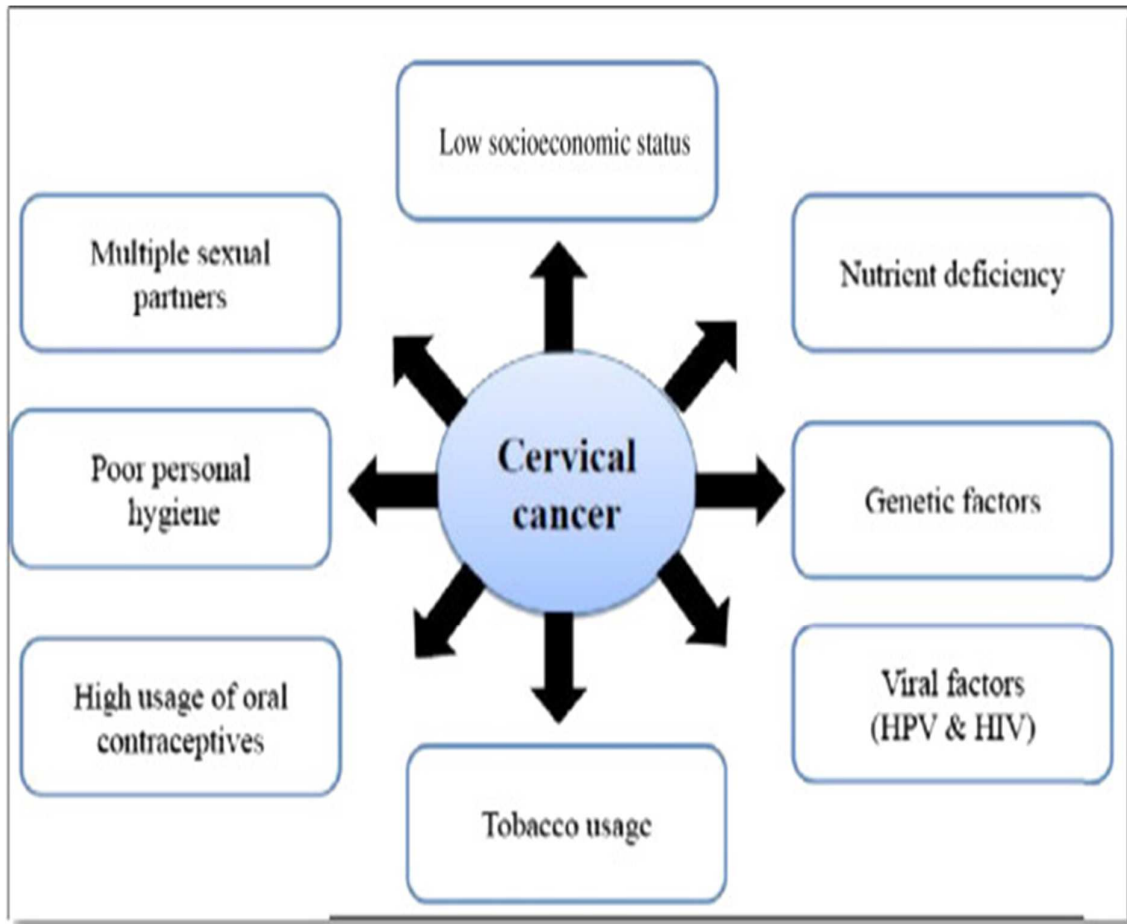


TABLE 2: CARCINOGENS

PAP SMEAR:

The cervix is visualised and the ectocervix is scraped using an Ayre spatula, endocervix with a cytobrush.

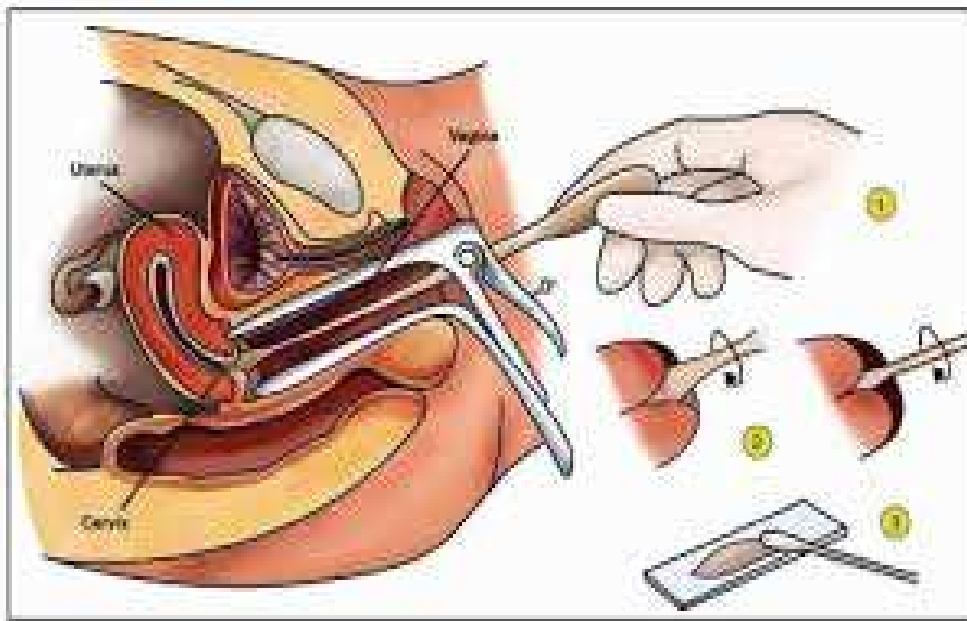
The cells are smeared on glass slide and fixed with 1:1 mixture of 95% ethanol and ether. They are stained using Papanicolaou stain and examined.

Poor sensitivity and high false-negative rate, although specificity is high.

Sensitivity is 51%, the false negative rate is 49%.

Specificity is 98%.

FIGURE 4: PAP SMEAR



BETHESDA CLASSIFICATION FOR CERVICAL CYTOLOGY

SPECIMEN TYPE

- Conventional smear(Pap smear)
- Liquid based preparation(Pap test)

SPECIMEN ADEQUACY

- Satisfactory
- Unsatisfactory

GENERAL CATEGORIZATION

- Negative for intraepithelial lesion or malignancy
- Other-Endometrial cells(in a women older than 45years)
- Epithelial cell abnormality

INTERPRETATION-

-Negative for intraepithelial lesion or malignancy

-Non-neoplastic findings

Non neoplastic cellular variations

Reactive cellular changes associated

Glandular cells status post hysterectomy

-Organisms

-Other

-Epithelial cell abnormalities

1.Squamous cell

A.Atypical squamous cell

-Of undetermined significance(ASCUS)

-Cannot exclude HSIL(ASC-H)

B.Lowgrade squamous intraepithelial lesion(LSIL)(encompassing HPV/mild dysplasia/CIN I)

C.High grade squamous intraepithelial lesion(HSIL)(encompassing moderate and severe dysplasia,CIS,CIN 2 and CIN 3)

-With features suspicious for invasion

D.Squamous cell carcinoma

2.Glandular cell

A.Atypical

Endocervical cell

Endometrial cells

Glandular cells

B. Atypical

Endocervical cells, favour neoplastic

Glandular cells, favour neoplastic

C. Endocervical adenocarcinoma in situ

D. Adenocarcinoma

Endocervical

Endometrial

Extrauterine

Not otherwise specified

-Other malignant neoplasms (specify)

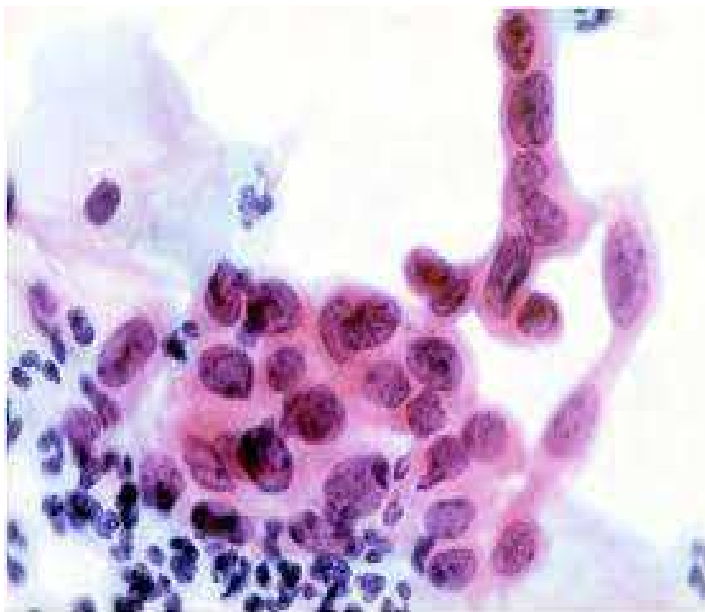


FIGURE 5 : ASC-H HISTOPATHOLOGY

MANAGEMENT AFTER CYTOLOGY OR HPV TESTING

1. Normal cytology alone or normal cytology and HPV negative can be screened according to guidelines

2. Normal cytology and HPV positive should have repeat testing after 12 months

3. The risk of developing CIN 2 or more after atypical squamous cells of undetermined significance (ASCUS) only is 6.9%

If HPV negative is 1%, HPV positive is 18%. Those positive must undergo colposcopic evaluation

4. Atypical squamous cells cannot exclude high grade lesion (ASC-H) has 35% progression to CIN 2 or more. Colposcopy evaluation irrespective of HPV Testing.

5. LSIL cytology without HPV testing needs colposcopic evaluation. However, if colposcopy is negative, repeat testing can be done after 1 year

6. All HSIL cytology should be evaluated by colposcopy.

7. All women with following diagnosis should be evaluated by colposcopy and endocervical curettage (ECC)

- Atypical endocervical or glandular cells

- Atypical endocervical or glandular cells - favour neoplasia

- Adenocarcinoma in situ

- Adenocarcinoma

8. Women more than 35 years with AIS or adenocarcinoma with risk factors for endometrial cancer should have endometrial sampling as well.

LIQUID BASED CYTOLOGY:

Cells scraped using a special broom collected in liquid medium. Processed, a smear of monolayer is made and fixed.

Drying distortion is eliminated.

Blood and other cells that interfere are removed.

The residual sample can be used for HPV testing.

Liquid Based Cytology (LBC)



DR. VARUGHESE GEORGE

FIGURE 6: LIQUID BASED CYTOLOGY

HPV TESTING:

In women more than 30 years, prevalence of HPV is high and transient.

The test has poor sensitivity and positive predictive value

FOR WOMEN MORE THAN 30 YEARS:**COTESTING:**

Along with cytology. Screening interval increased to 5 years

REFLEX TESTING:

Sample collected along with cytology but processed only if cytology is equivocal.

VISUAL INSPECTION AFTER ACETIC ACID:

Acetic acid coagulates the mucus and the areas of cells with increased chromatin density appears white. Specificity is 80% and false positive rates are high.

If VIA is POSITIVE,

-Referral for colposcopy guided biopsy can be advised.

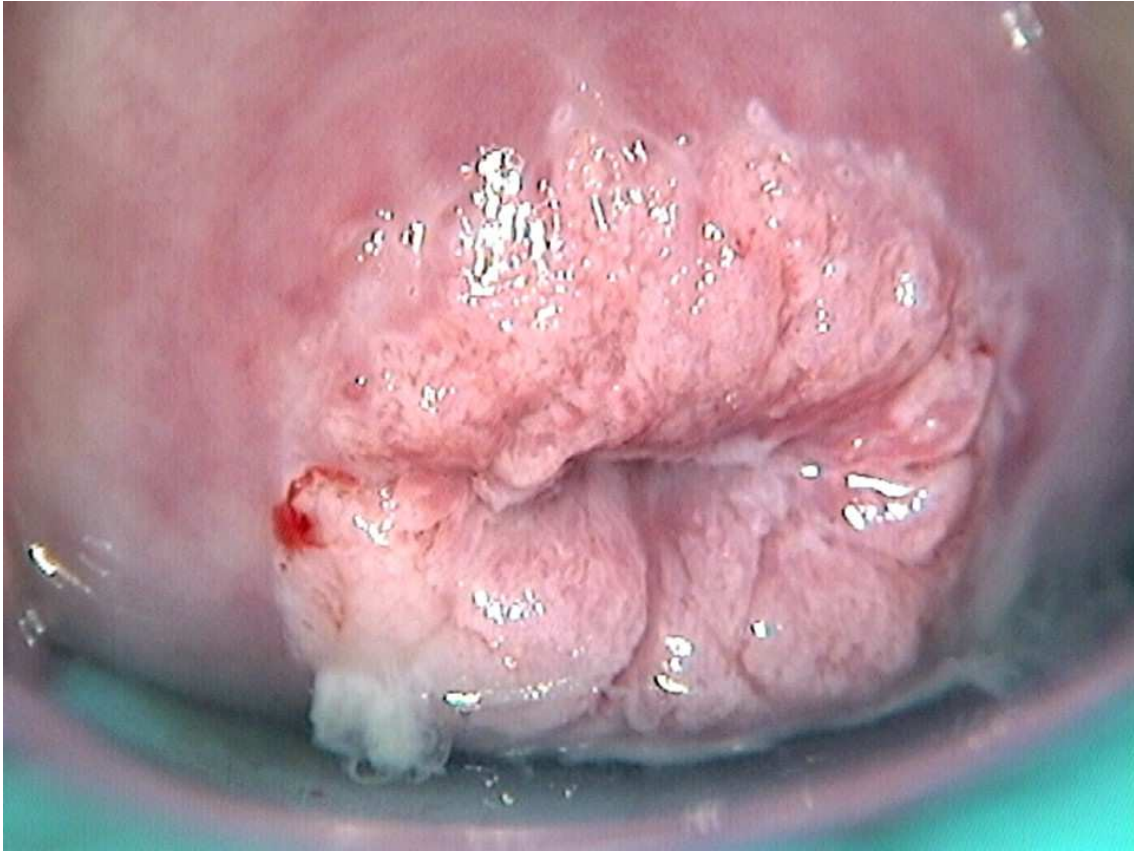


FIGURE 7 -The columnar epithelium becomes more prominent and whitish. SCJ junction seen clearly.No whitish area noted in the TZ zone

VISUAL INSPECTION AFTER LUGOLS IODINE:

On application with Lugoliodine,normal cervical epithelium which is rich in glycogen stains mahogany brown(Schiller test)

The abnormal areas,columnar epithelium, areas lined by immature metaplastic epithelium do not contain iodine and appear mustard yellow.

Specificity is 80%,false positive rates are high.

Combining VIA and HPV testing improves sensitivity and false positiverates.

FIGURE 8:VILI



FIGURE 3.15:
VILI positive: There are large, thick, mustard yellow areas of iodine non-uptake in the upper and lower lip of cervix extending into the cervical canal.

SCREEN AND TREAT PROTOCOLS:

ONE VISIT PROTOCOL:

Screen and treat. Following screening by VIA or rapid HPV test, women who test positive are treated by cryotherapy.

Better compliance and less cost.

But overtreatment can occur.

TWO-VISIT PROTOCOLS:

Screen, see and treat. Women screened by cytology and during second visit, women with cytology positive are evaluated by colposcopy and treated by cryotherapy or loop electro excision procedure (LEEP) in the same setting.

Not suitable in low resource setting where colposcopy and LEEP not available.

COLPOSCOPY

It is the visualisation of cervix,vagina and vulva under magnification to detect premalignant and malignant lesions.

The colposcopy is magnification system with a light source,mounted on a stand.

Saline removes mucus and discharge and makes it possible to view obvious abnormalities.

On application of acetic acid,areas with high chromatin density stain white(acetowhite) signifying the areas of squamous metaplasia,CIN and cancer.

The new SCJ and TZ can be clearly visualized. The gland openings and abnormal vascularity become distinctly visible.The abnormal areas can be well delineated with lugols iodine.



FIGURE 9:COLPOSCOPY

PROCEDURE:

Place the patient in dorsal/lithotomy position.

Place the colposcopy 1 feet from vulva.

Insert bivalve speculum. Focus colposcopy on the cervix

Use low power for overall visualisation initially

Shift to high power for closer visualisation of lesions

Clean with saline,remove mucus and note findings.

Apply 3%acetic acid and note findings

Apply Lugols iodine and note findings

Document colposcopic findings

Perform guided biopsy,if indicated.

COLPOSCOPIC TERMINOLOGY:

ADEQUACY:

Adequate /Inadequate

SQUAMOCOLUMNAR JUNCTION:

TYPE 1-Completely visible

TYPE 2-Partially visible

TYPE 3-Not visible

TRANSFORMATION ZONE:

TYPE 1-Entirely on ectocervix,fullyvisible,can be small of large.

TYPE 2-Endocervical component,fully visible

TYPE 3-Endocervical component,not fully visible.

NORMAL COLPOSCOPIC FINDINGS:

1.ORIGINAL SQUAMOUS EPITHELIUM

- Mature
- Atrophic

2.COLUMNAR EPITHELIUM

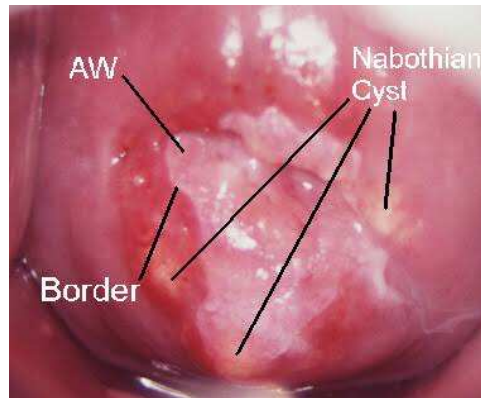
- Ectopy

3.METAPLASTIC SQUAMOUS EPITHELIUM

- Nabothian cysts
- Crypts(gland) openings

4.Deciduous in pregnancy.

FIGURE 10:NABOTHIAN CYST



ABNORMAL COLPOSCOPIC FINDINGS:

GRADE 1(MINOR)

Thin acetowhite epithelium -Fine mosaic

Irregular,geographical

border-Fine

punctuation

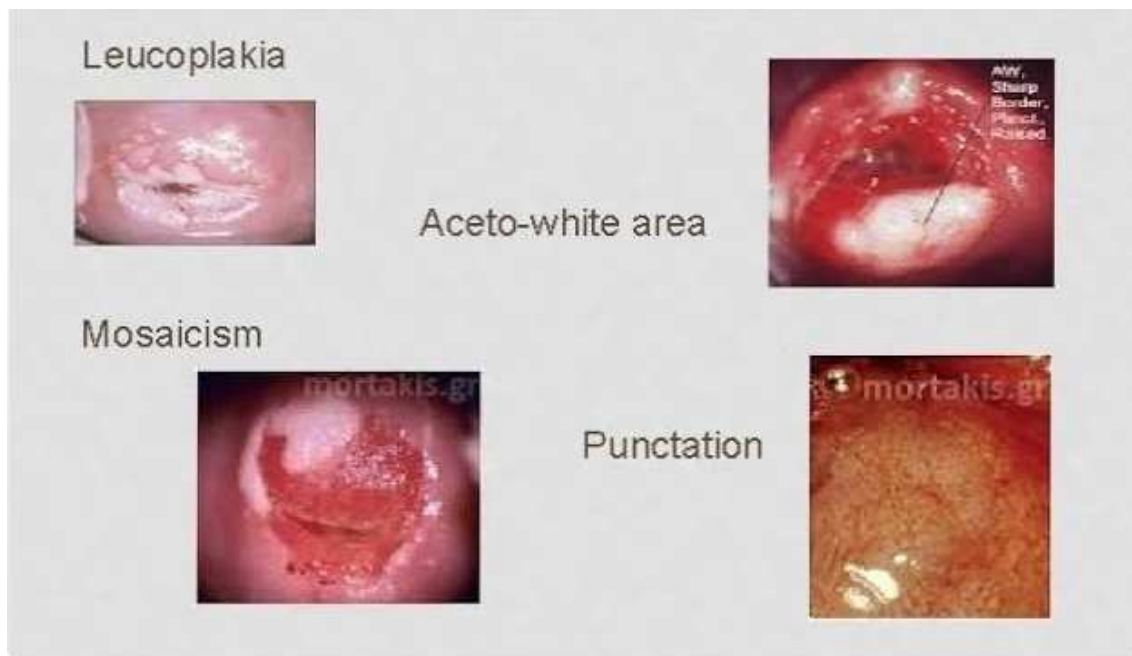


FIGURE 11:ABNORMAL COLPOSCOPIC FINDINGS

GRADE 2(MAJOR)

- Dense acetowhite epithelium-Coarse mosaic
- Rapid appearance of acetowhiting-Coarse punctation
- Cuffed crypts(gland)openings
- Sharp border
- Inner border sign
- Ridge sign

NONSPECIFIC:

- Leukoplakia(keratosis,hyperkeratosis)
- Erosion
- Lugolstaining(SCHILLER TEST):stained/non stained

SUSPICIOUS FOR INVASION:

- Atypical vessels
- Fragile vessels,irregular surface
- Exophytic lesions
- Necrosis
- Ulceration(necrotic)
- Tumour/gross neoplasm

MISCELLANEOUS:

- Congenital Transformation Zone
- Condyloma
- Polyp
- Inflammation
- Stenosis
- Posttreatment consequence
- Endometriosis.

FIGURE 12-LSIL,HSIL,CIN 1 IN COLPOSCOPY



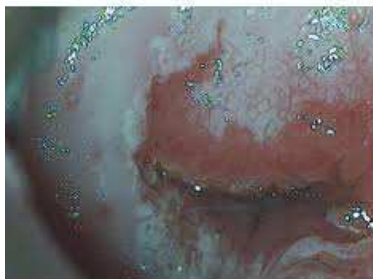
Figure 2 – Mosaic: fine, regular, smooth surface (LSIL).



Figure 3 – Mosaic: irregular, uneven (HSIL).



Figure 4 – Acetic acid stain: punches and fine mosaic – CIN I.



**COLPOSCOPIC
SCORING-REIDS
COLPOSCOPIC
INDEX AND
SWEDE SCORE**

SCORING OF COLPOSCOPY BY REIDS INDEX

TABLE 3: REIDS COLPOSCOPIC INDEX

COLPOSCOPY SIGN	SCORE 0	SCORE 1	SCORE 2
MARGIN	Condylomatous or micropapillary contour. Flocculated or feathered, jagged, angular, satellite lesion, AWA beyond original squamocolumnar junction	Regular lesion with smooth indistinct borders	Rolled, peeled edges, sharp margin
COLOUR	Shiny, snow, white areas of faint (semi transparent) whitening	Intermediate shade (shiny but grey white)	Dull, oyster grey
VESSELS	Uniform, fine, calibre non dilated capillary loops fine punctuation or mosaic	Absence if surface vessels	Definite, coarse punctuation or mosaic
IODINE STAINING	Any lesion staining Mahogany brown; mustard yellow stains by a minor lesion (by first three criteria)	Partial iodine uptake	Mustard yellow staining of a significant lesion (an acetowhite area scoring 3 or more points by first three criteria)

TABLE3: REIDS COLPOSCOPIC INDEX SCORE

SCORE	COLPOSCOPIC FINDINGS
0-2	Likely to be CIN I
3-4	Overlapping likely to be CIN 1 or 2
5-8	Likely to be CIN 2 or 3

TABLE 4: SWEDE SCORING OF COLPOSCOPY

SWEDE SCORE	0	1	2
Acetouptake	Zero or transparent	Shady,milky(not transparent not opaque)	Distinct opaque white
Margins/surface	Diffuse	Sharp but irregular,jagged,geographical satellites	Sharp and even difference in surface level including cuffing
Vessels	Fine,regular	Absent	Coarse of atypical
Lesion size	<5mm	5-15mm or 2 quadrants	>15mm or 3-4 quadrants or endocervically undefined
Iodine staining	Brown	Faintly or patchy yellow	Distinct yellow

SWEDE SCORE	COLPOSCOPIC PREDICTION
0-4	Low grade/normal
5-6	High grade/non invasive
7-10	High grade/suspected invasive

MANAGEMENT OF CERVICAL INTRAEPITHELIAL NEOPLASIA

CIN I MANAGEMENT:

WOMEN MORE THAN 25YEARS

1.IF LSIL PRECEDED BY ASCUS/LSIL,

Progression to invasive cancer is less than 1%.

Followup with cytology/HPV cotesting at 12months.

If cytology/HPV positive, colposcopy indicated.

2.IF LSIL PRECEDED BY ASC-H/HSIL,

Progression to cancer is higher

Followup with cotesting at 12 and 24 months

Treatment with excision procedure

Review of cytology,histology,colposcopy.

WOMEN LESS THAN 25 YEARS:

1.IF LSIL PRECEDED BY LESSER ABNORMALITIES:

Repeat cytology at 12 and 24 months

2.IF LSIL PRECEDED BY HSIL/H:

Cytology and colposcopy every 6months for 2 years.

If shows HSIL,Colposcopy guided biopsy are indicated.

MANAGEMENT OF CIN II AND III:

Risk of progression in CIN II and III to invasive is 5% and 12% respectively, hence treatment mandatory.

WOMEN WHO HAVE COMPLETED REPRODUCTIVE FUNCTION

If colposcopy adequate and TZ visible, excision or ablation recommended.

If colposcopy inadequate, HSIL recurrent or endocervical sampling reveals HSIL, excision is recommended.

YOUNG WOMEN DESIROUS OF FURTHER REPRODUCTION

If colposcopy is adequate,

Observation with cytology and colposcopy every 6 months followed by HPV cotesting 1 year later. If HSIL persists, repeat biopsy.

Excision or ablation

If Colposcopy inadequate,

Immediate excision or ablation.

TREATMENT MODALITIES

ABLATIVE PROCEDURES:

- Thermo ablation
- Cryotherapy
- Carbon dioxide laser

EXCISIONAL PROCEDURES:

- LEEP
- Cold-knife ionization
- Carbon dioxide laser cone

ABLATIVE PROCEDURES:

- Specimen cannot be sent for histology
- Entire lesion and TZ should be seen
- Extension into endocervical should be less than 1.5cm
- Prior histological confirmation of diagnosis is required.

THERMOABLATION:

- Performed as office procedure.
- Using electro cautery, the entire TZ with lesion cauterized.
- Depth should be 5-7mm to destroy the disease in crypts.
- Recurrence rate is slightly higher.

CRYOTHERAPY:

Involves freezing of tissue followed by thawing, which leads to formation of intracellular ice crystals, resulting in expansion and rupture of cells.

2 Cycles alternates 3 mins of freezing with 5 minutes of thawing.

Carbon dioxide or nitrous oxide is used for freezing

The probe which will cover entire lesion should be selected.

Depth is only 5mm, hence will not cover CIN extending to crypts.

Followup with pap smear and colposcopy at 4-6 months.

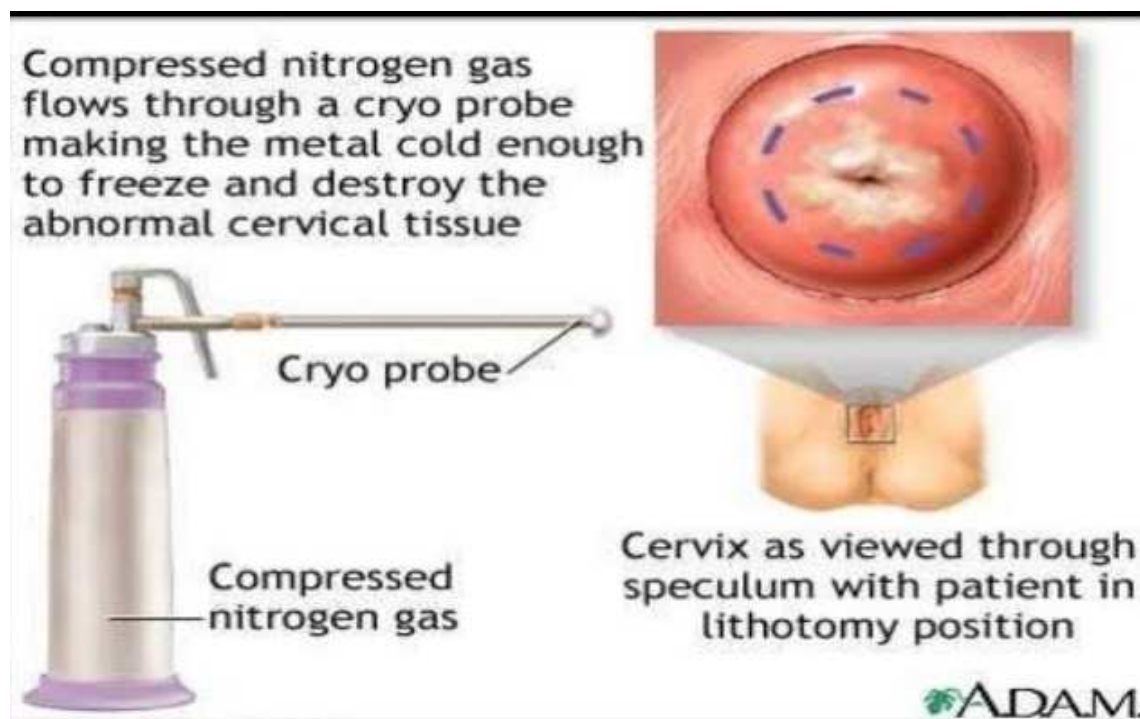


FIGURE 14: CRYOTHERAPY

LASER ABLATION:

Popular method of treating cervical lesions.

Entire lesion should be visible.

CO2 laser is used, epithelium vapourised, water in cells steamed, the cell is destroyed.

Success rate is 95%

EXCISIONAL PROCEDURES:

The excision of TZ Including a portion of the endocervical canal in a cone shaped fashion.

Distinct advantage that specimen can be sent for histology.

TYPE 1:

Resects type 1 TZ(Completely ectocervical)

TYPE 2:

Resects type 2 TZ(includes small amount of endocervical epithelium)

TYPE 3:

Resects type 3 TZ(Longer and larger cone shaped tissue and significant amount of endocervical epithelium)

LOOP ELECTROEXCISION PROCEDURES:

Also referred to as LLETZ(Large Loop Electro excision Of the Transformation Zone)

The treatment of choice in women with CIN II And III.

Performed with wire loop cautery at 30-40W power

A straight wire can be used instead called Straight Wire excision of the Transformation Zone(SWETZ).

Outpatient procedure,performed under local anesthesia

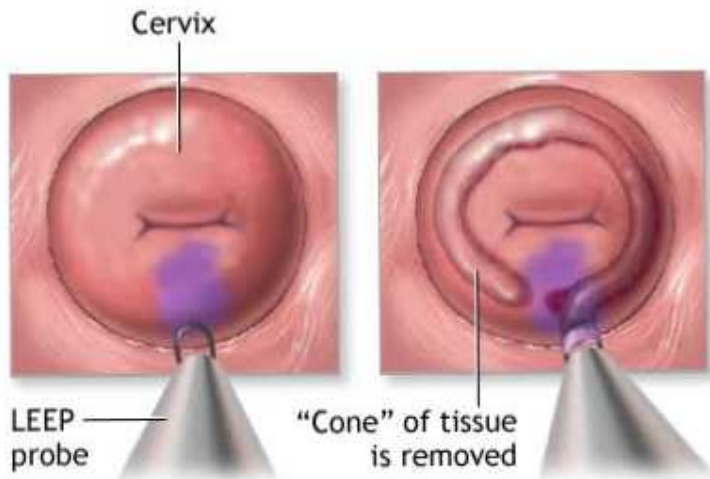
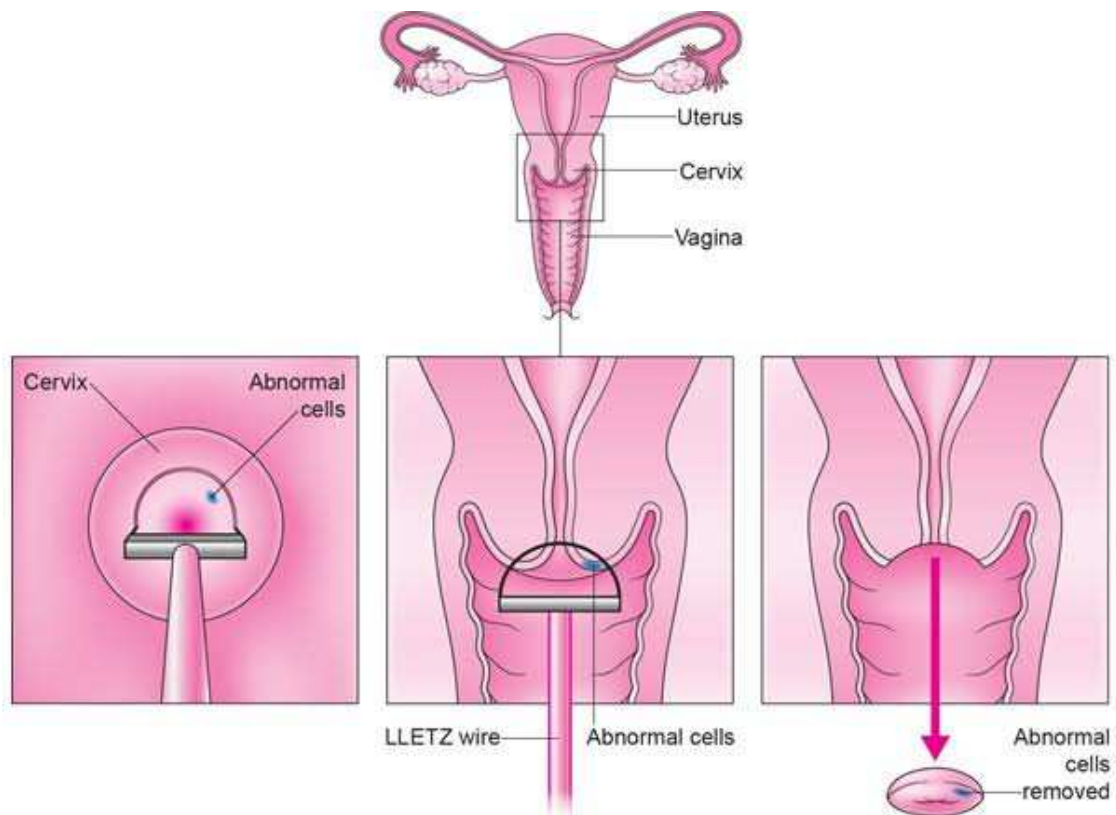
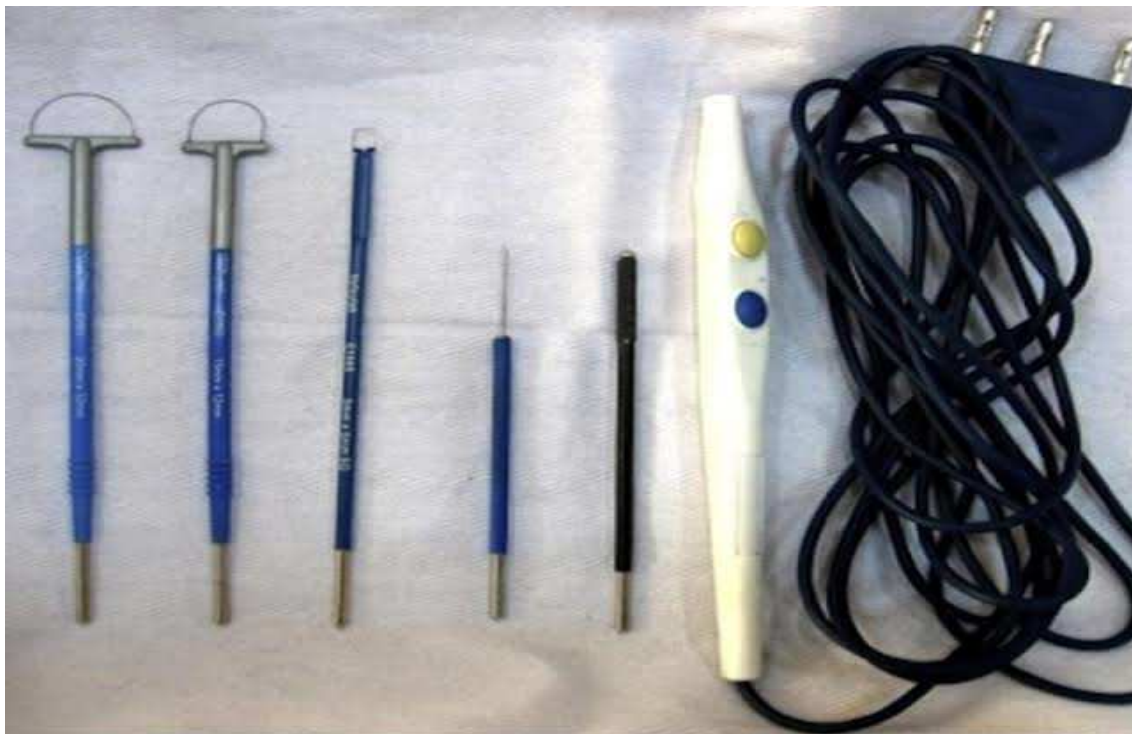


FIGURE 14: Loop Electro Excision Procedure



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COLD KNIFE CONISATION:

Excision of cone shaped specimen with base at ectocervix and apex at endocervical canal close to internal os.

It requires anesthesia, done in an operating room.

INDICATIONS:

- Lesion extending to endocervical canal
- Histological diagnosis of AIS
- Recurrent AGC cytology
- Cytology histology discordance
- Suspected microinvasive cancer
- Recurrent high grade lesions
- Large lesions.

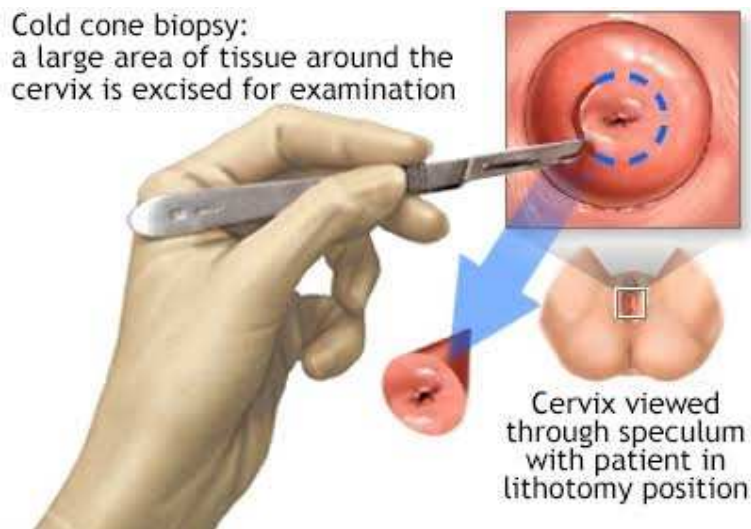


FIGURE 15:COLD KNIFE CONISATION

STEPS:

- Spinal/general anesthesia
- Colposcopy and application of lugols iodine
- Infiltration of adrenaline into cervix
- Sutures at 3 and 9'o clock position
- Excision of cone using knife
- Cauterization of bleeding points
- Hemostatic pack in vagina

LASER CONIZATION

- Done using CO2 laser micro probe
- Expensive equipment and needs expertise.

COMPLICATIONS OF CONIZATION**IMMEDIATE:**

- Hemorrhage
- Infection

LATE:

- Cervical stenosis
- Cervical incompetence
- -Recurrent pregnancy loss
- -Preterm labour

HYSTERECTOMY:

INDICATIONS:

- Adenocarcinoma in situ
- CIN III with cone margins involved.
- Older women
- Not reliable for follow up
- Recurrent high grade lesions.

MATERIALS AND METHODS

AIM OF THE STUDY

- To correlate two colposcopic indices – swede score and reids index and to prevent overtreatment

OBJECTIVES OF THE STUDY:

- To find the effectiveness of SWEDE score in correlation with REIDS colposcopic index in an aim to prevent overtreatment.

INCLUSION CRITERIA:

- All patients of age group 20-59 who are screening positive VIA/VILI positive /Pap smear positive
- Persistent inflammatory smears
- Unhealthy looking cervix
- Postcoital bleeding

EXCLUSION CRITERIA

- Obvious growth
- Previous procedure on cervix
- Pregnant women
- Severe debilitating disease

SAMPLE SIZE:

$$Z^2 * p * q / d^2$$

Where Z=1.96(statistically significant value)

p=88.5%(sensitivity of colposcopy using REID score in diagnosing CIN I as disease threshold)

$$q=11.5%(100-p)$$

d=5%(absolute precision)

Therefore by using formula

$$3.84 * 88.5 * 11.5 / 25$$

Minimum sample size n=157

Adding 10% non response rate

Minimum sample size

$$n=163$$

Therefore sample size n=165

METHODOLOGY:

All patients with age group 30 to 59 years with abnormal screening test are selected for the study

Relevant information,detailed history regarding past history regarding past history,maritalhistory,obstetric history are recorded using preformed proforma

Oral and written consent are obtained

Colposcopy will be done for the patients of study and the visualization of cervix was done under magnification and findings were noted

The margins of the atypical cervical epithelium were graded accordingly and scores will be allotted as per both reids index and swede score

Colposcopy directed biopsy from abnormal areas were taken

Patient will be explained about nature of study and informed consent is obtained

The results will be scored by statistical methods.

RESULTS

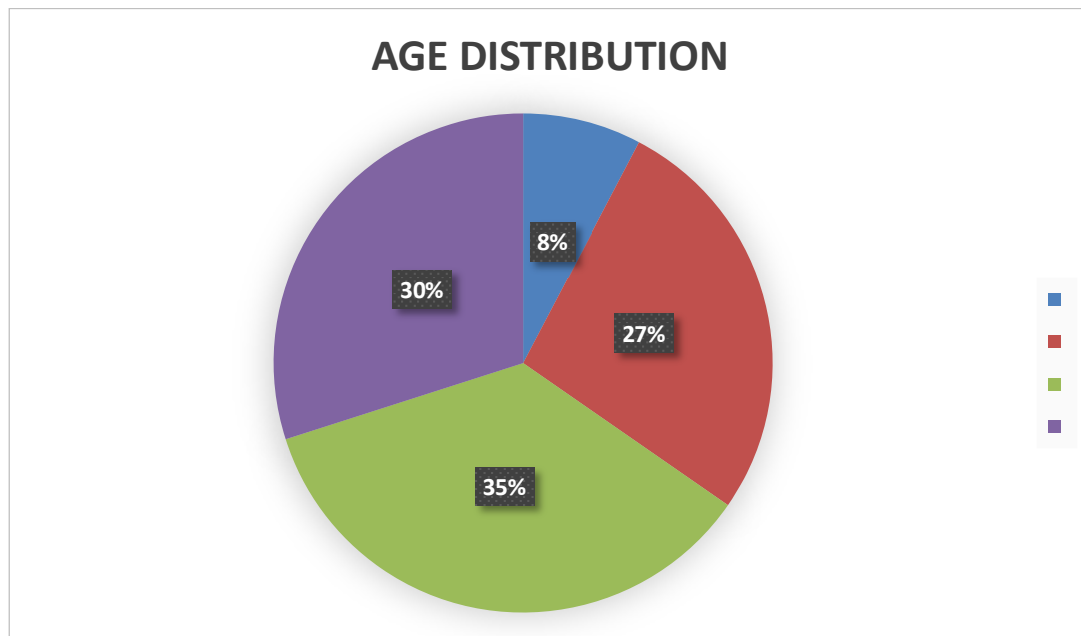
ANALYSIS OF RESULTS

Data were entered into Microsoft Excel spreadsheet and analysed. Descriptive studies such as mean, standard deviation, values were calculated. Frequency disturbances were compared using Chi-square test as appropriate. Sensitivity and specificity analyses were done between scores and histology. Correlation coefficient was compared between REIDS INDEX and SWEDE SCORE.

TABLE 5:AGE DISTRIBUTION AMONG STUDY GROUPS

AGE DISTRIBUTION	FREQUENCY	PERCENT
20-30YEARS	13	7.7
31-40YEARS	45	26.9
41-50YEARS	59	35.3
51-60YEARS	50	29.9
TOTAL	167	100

CHART 1: AGE DISTRIBUTION IN STUDY GROUP



Among the 167 women, 7.7%(13/167) were between 20-30years. 45 women were between 31-40years. 35%(59/167) belonged to the age group of 41-50years. 29% women belonged to 51-60years.As age increases, incidence of CIN also increases. The incidence of CIN is higher among the age group of 41-60 in our study.

TABLE 6: MEAN AGE OF THE STUDY GROUP

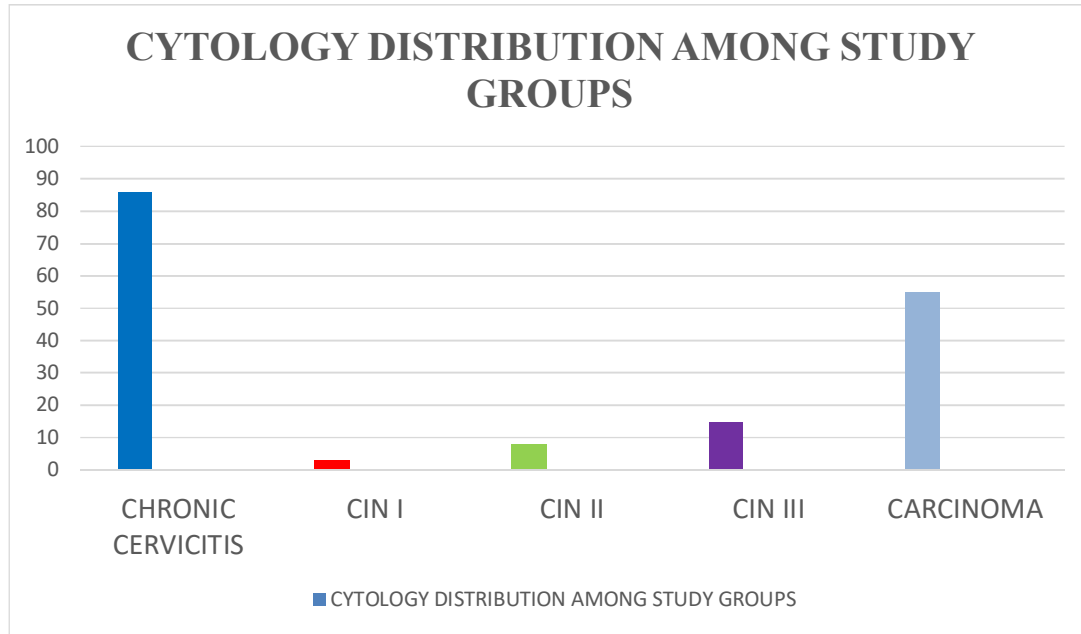
	N	MINIMUM	MAXIMUM	MEAN	SD
AGE	167	25	60	44.6	9.5

In the present study the total study was done in 167 patients with a maximum age of 60 and minimum age of 25.The mean age was 44.9 and standard deviation was 9.5

TABLE 7: CYTOLOGY DISTRIBUTION AMONG STUDY GROUPS

CYTOLOGY	FREQUENCY	PERCENT
CHRONIC CERVICITIS	86	51.4
CIN I	3	1.7
CIN II	8	4.7
CIN III	15	8.9
CARCINOMA	55	32.9
TOTAL	167	100

CHART 2:CYTOLOGY DISTRIBUTION AMONG STUDY GROUPS

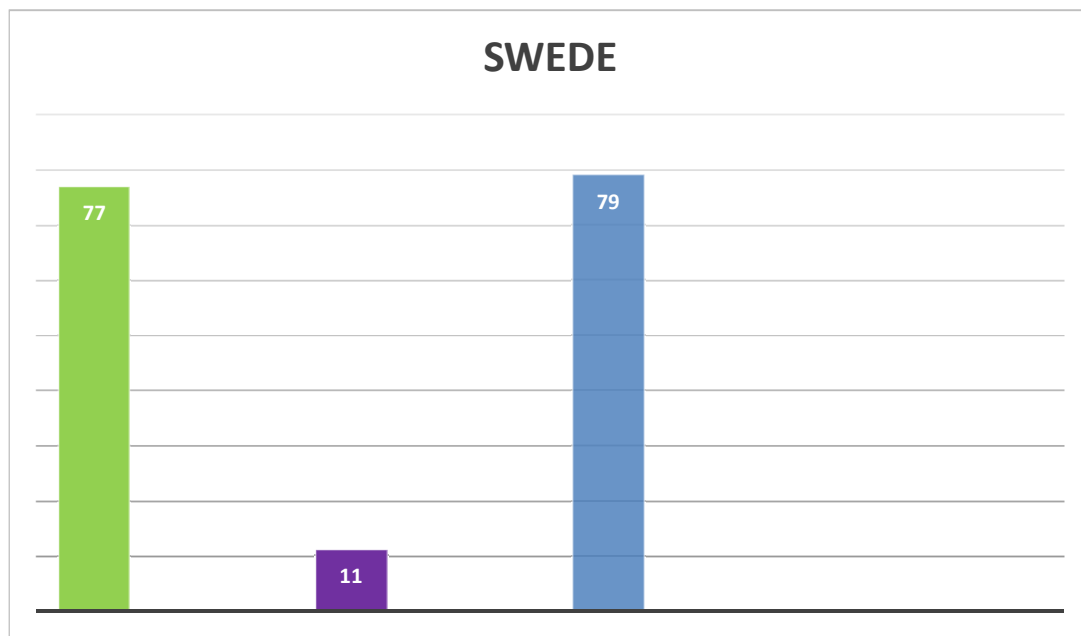


Among the study groups,86 were found to have chronic cervicitis in biopsy report,3 had CIN I,8 (4.7%) had CIN II,15(8.9%) had CIN III,55(32.9%) had carcinoma which correlates with our scores.

TABLE8:SWEDE distribution among study groups

SWEDE	FREQUENCY	PERCENT
0-4	77	46.1
5-6	11	6.58
7-10	79	47.3
TOTAL	167	100

CHART3 :SWEDE distribution among study groups



**TABLE 9: DISTRIBUTION OF SUBJECTS AT DIFFERENT VALUES OF SWEDE
COLPOSCOPIC SCORE (N=167)**

SCORE	FREQUENCY	CHRONIC CERVICITIS	CIN I	CIN II	CIN III	CARCINOMA
1	0	0				
2	14	14				
3	39	39				
4	24	24				
5	7	6		1		
6	4	2		2		
7	10		2	1	5	2
8	19	1	1	4	4	9
9	33				6	27
10	17					17
TOTAL	167	86	3	8	15	55

Findings of colposcopic examination were scored according to SWEDE score. Out of 167 women,78 had high grade lesions.Based on the SWEDE score,it was 55 out of 167 would have carcinoma.Among the SWEDE Score (5or more),3 would have CIN I lesion,78 have high grade lesions.

TABLE 10: RCI distribution among study groups

RCI	FREQUENCY	PERCENT
1-2	44	26.34
3-4	39	23.35
5-8	84	50.29
TOTAL	167	100

CHART 4: RCI distribution among study groups

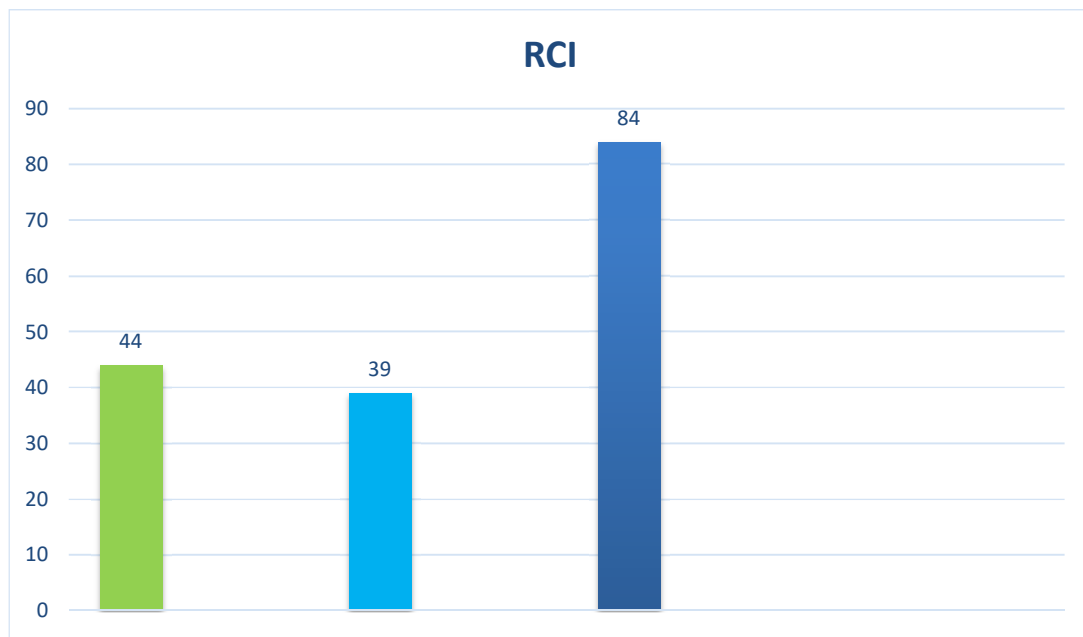


TABLE 11:Distribution of subjects among different values of REIDS COLPOSCOPIC INDEX(N=167)

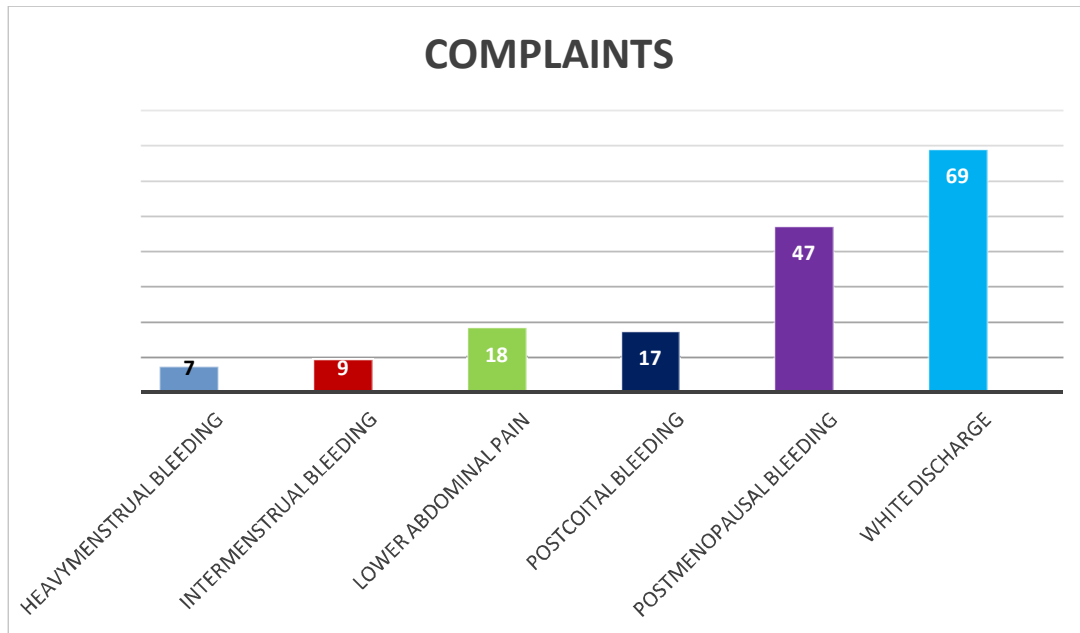
SCORE	FREQUENCY	CHRONIC CERVICITIS	CIN I	CIN II	CIN III	CARCINOMA
1	6	6				
2	38	38				
3	24	24				
4	15	14		1		
5	9	2	2	3	2	
6	18	2	1		6	9
7	17			2	5	10
8	40			2	2	36
TOTAL	167	86	3	8	15	55

Findings of colposcopic examination were scored according to REIDS COLPOSCOPIC INDEX. Of the 167 women,78 had high grade lesions. Based on the score, it was anticipated that 81 would have some grade of CIN,REIDS index (5 or more)3 out of 167 had CIN I,77 would have high grade lesions.

TABLE 12: Complaints among study groups

COMPLAINTS	FREQUENCY	PERCENT
Heavymenstrual bleeding	7	4.19
Intermenstrual bleeding	9	5.38
Postcoital bleeding	17	10.17
Postmenopausal bleeding	47	28.14
White discharge	69	41.31
Lower abdominal pain	18	10.77
TOTAL	167	100

CHART 5: Complaints among study groups



Among the complaints, most of women 69 out of 167 had complaints of white discharge per vaginum, 47 had postmenopausal bleeding.

TABLE 13: Association of cytology with age among study groups

AGE	CHRONIC CERVICITIS		CIN I		CIN II		CIN III		CARCINOM A		TOTAL
	NO	%	NO	%	NO	%	NO	%	NO	%	
20-30 Years	10	76.9%	0	0%	2	15.4%	1	7.7%	0	0%	13
31-40 Years	35	77.8%	0	0%	3	6.7%	0	0%	7	15.6%	45
41-50 Years	27	46.6%	2	3.4%	3	5.2%	5	8.6%	21	36.2%	58
51-60 Years	14	27.5%	1	2%	0	0%	9	17.6%	27	52.9%	51
TOTAL	86	51.5%	3	1.8%	8	4.8%	15	9%	55	32.9%	167
P VALUE-0.0005											

CHART 6: Association of cytology with age among study groups

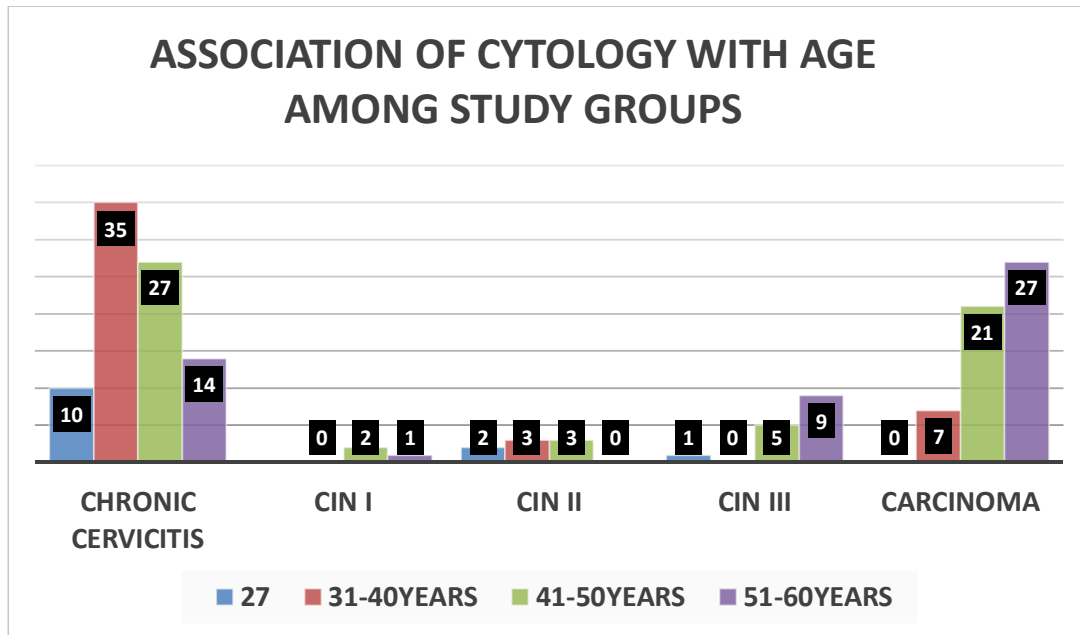


TABLE 14: Association of cytology With RCI among study groups

RCI	CHRONIC CERVICITIS		CIN I		CIN II		CIN III		CARCINOMA		TOTAL
	NO	%	NO	%	NO	%	NO	%	NO	%	
1-2	44	100%	0	0%	0	0%	0	0%	0	0%	44
3-4	38	97.4%	0	0%	1	2.6%	0	0%	0	0%	39
5-8	4	4.8%	3	3.6%	7	8.3%	15	17.85%	55	65.47%	84
TOTAL	86	51.5%	3	1.8%	8	4.8%	15	9%	55	32.9%	167

P VALUE-0.0005

CHART 7: Association of cytology with RCI among study groups.

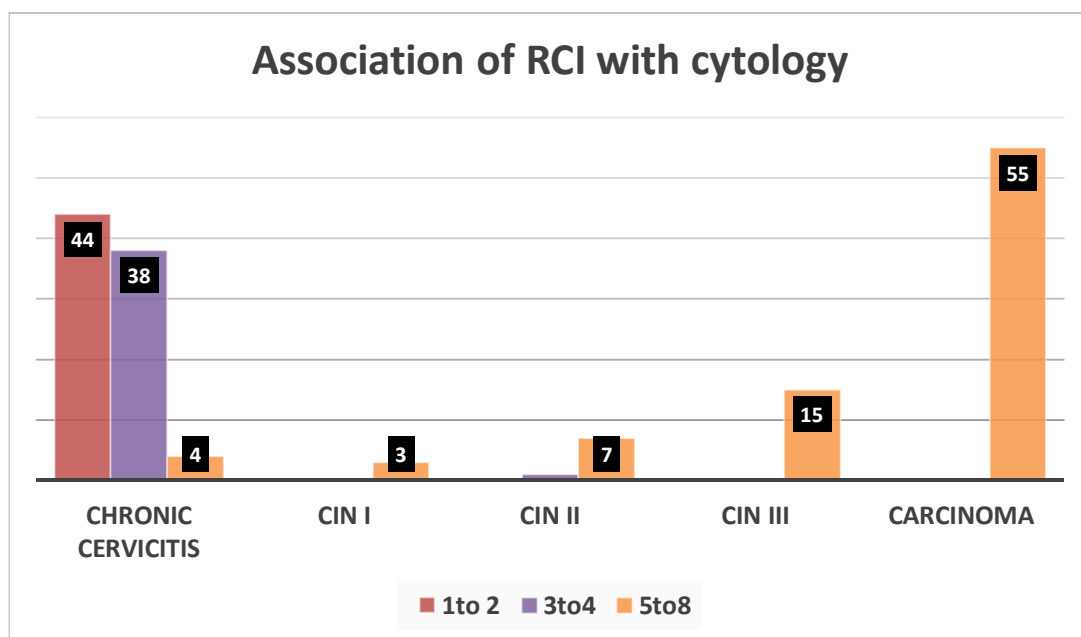


TABLE15 : Association of cytology with SWEDE score among study groups

SWEDE	CHRONIC CERVICITIS		CIN I		CIN II		CIN III		CARCINOMA		TOTAL
	NO	%	NO	%	NO	%	NO	%	NO	%	
0-4	77	100%	0	0%	0	0%	0	0%	0	0%	77
5-6	8	72.7%	0	0%	3	27.3%	0	0%	0	0%	11
7-10	1	1.3%	3	3.8%	5	6.3%	15	19%	55	69.6%	79
TOTAL	86	51.5%	3	1.8%	8	4.8%	15	9%	55	32.9%	167

P VALUE-0.0005

CHART 8: Association of cytology with SWEDE among study groups

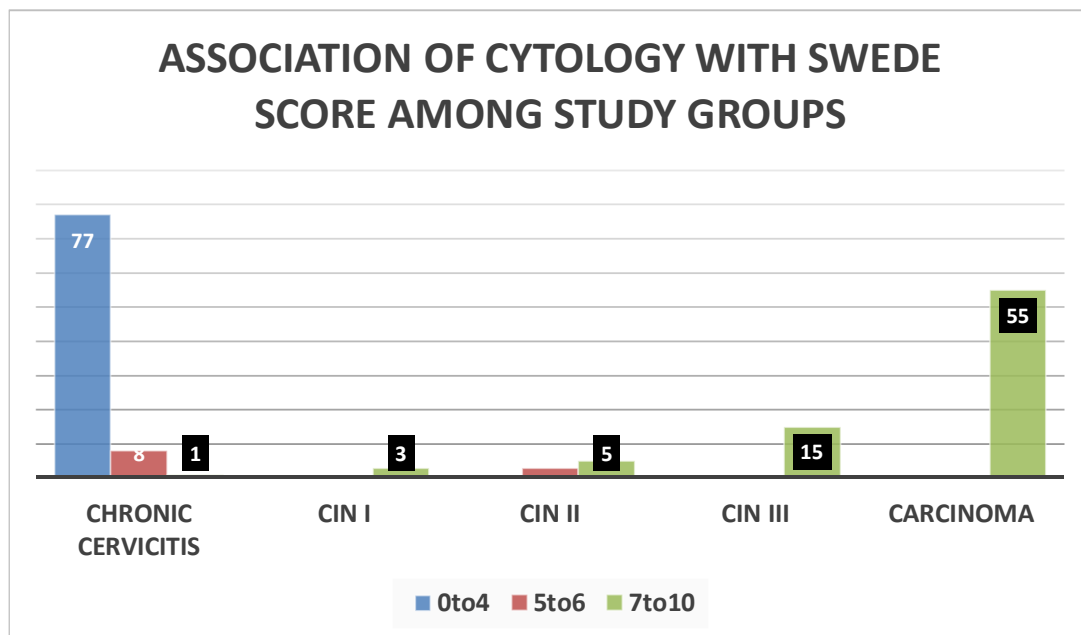


TABLE 16:Correlations

		Swede's Score
RCI Score	R value	.966**
	p-value	.0005
	N	167

CHART 9: CORRELATION CURVE

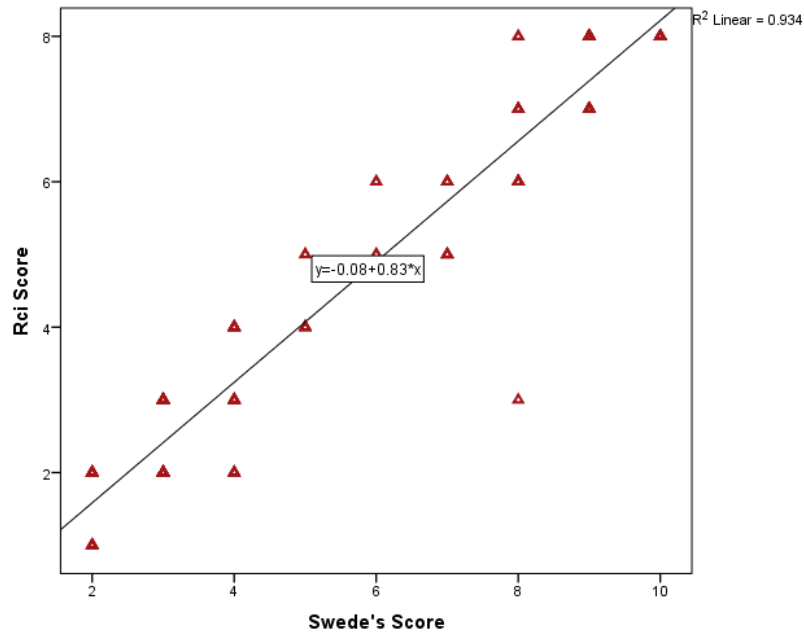


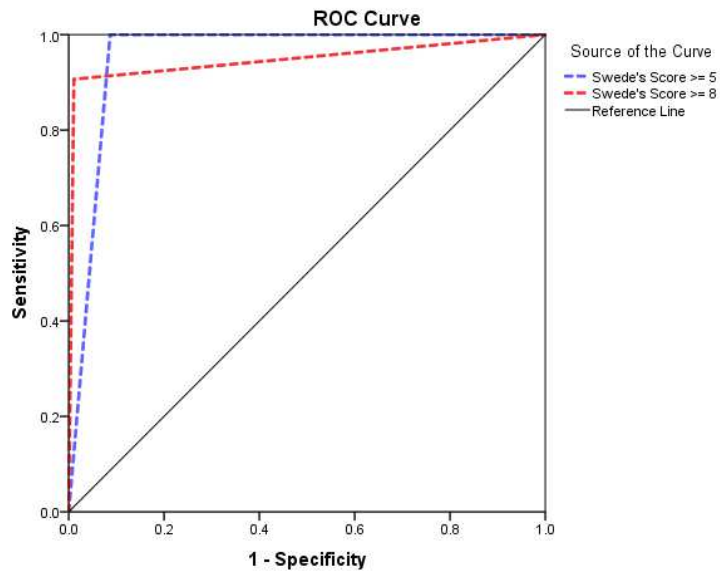
TABLE 17:ROC

Area Under the Curve

Test Result Variable(s)	Area	Std. Error ^a	p-value	95% C.I	
				LB	UB
Swede's Score ≥ 5	.957	.017	.0005	.922	.991
Swede's Score ≥ 8	.948	.021	.0005	.907	.989

The test result variable(s): Swede's Score ≥ 5 , Swede's Score ≥ 8 has at least one tie between the positive actual state group and the negative actual state group. Statistics may be biased.

CHART 10:ROC CURVE



Diagonal segments are produced by ties.

TABLE 18:

SWEDE SCORE ≥ 5 WITH RCI SCORE

		RCI SCORE		
		MALIGNANT	BENIGN	TOTAL
SWEDE SCORE ≥ 5	MALIGNANT	75	8	83
	BENIGN	0	84	84
TOTAL		75	92	167

SENSITIVITY	100
SPECIFICITY	91.3
PPV	90.4
NPV	100
ACCURACY	95.2

TABLE 19:

SWEDE SCORE ≥ 8 WITH RCI SCORE

		RCI SCORE		
		MALIGNANT	BENIGN	TOTAL
SWEDE SCORE ≥ 8	MALIGNANT	68	1	69
	BENIGN	7	91	98
TOTAL		75	92	167

SENSITIVITY	90.7
SPECIFICITY	98.9
PPV	98.6
NPV	92.9
ACCURACY	95.2

The present study showed that the specificity for a total score of 8 or more was 98.9 % and sensitivity was 90.7% for CIN 2+ lesions which was better than the results when compared to the scores when reduced to 5, sensitivity was 100% while the specificity became 91.3% which is at the expense of specificity. The association of SWEDE score and the cytology was statistically significant (0.0005)

The present study compared the performance of swede score with REIDS index with sensitivity,specificity, negative predictive value,positive predictive value and accuracy.A good and graded agreement between REIDS and swede score with histopathology was documented. There was a good correlation between REIDS and swede score and the correlation coefficient was 0.966

DISCUSSION

Cervical cancer which was the second most common cancer worldwide. Since it has the larger preinvasive stage, it is very easy to screen and treat the patient before progression.

The present study deals with the screening of cervical cancer which included a sample of 167 women with abnormal symptoms like excessive white discharge, postmenopausal bleeding, postcoital bleeding, intermenstrual bleeding, women with abnormal VIA, VILI and pap smear.

Further proceeded with the help of colposcopy and biopsy in women with above mentioned symptoms and abnormal papsmear or VIA/VILI. Based on the results obtained, we calculated the sensitivity and specificity of two scores (reids and swede) and compared it with biopsy.

Regarding age distribution, majority were women more than the age of 40 (109/167). Carcinoma cervix was prevalent in women more than 40 years.

Based on the clinical complaints, majority of patients had excessive white discharge (69/167) followed by postmenopausal bleeding (47/167).

Based on the theory, postmenopausal bleeding is highly predictive and pointing towards cancer cervix. Postcoital bleeding also noted in 10 among 16.

The present study revealed that the specificity of 98.9% when swede score was more than or equal to 8.No CIN 2+ lesions were noted when the swede score was less than 5.But when the score was reduced to 5, sensitivity reaches 100% at the specificity of 91.3% which was decreased.The negative predictive value was 100% when the score was reduced to 5.The association of swede score with cytology is statistically significant.

CONCLUSION

Thus, it was concluded that both scores performed well in this hospital based study on a selected population referred to colposcopic clinic. From the present study, it is evident that SWEDE score of 8 or more has good specificity and can be used for performing direct excisional procedure as a “see and treat” method at this cutoff. Hence LESION SIZE parameter included in SWEDE SCORE act as a good predictor of high-grade lesions.

This may be the preferred method for the management of high grade CIN because it reduces the number of visits and failure to receive treatment.

The main strength of the study is that biopsies were taken for all subjects irrespective of the presence or absence of lesion in colposcopy, eliminating the verification bias.

PROFORMA

“A COMPATIVE DIAGNOSTIC VALIDITY OF REIDS INDEX AND SWEDE SCORE WITH CERVICAL HISTOLOGY”

NAME :

AGE :

OP / IP NO :

ADDRESS & CONTACT NO :

COMPLAINTS:

POSTCOITAL BLEEDING

INCREASED DISCHARGE PV

MENSTRUAL ABNORMALITIES

PELVIC PAIN

POSTMENOPAUSAL BLEEDING

MENSTRUAL HISTORY : REGULAR / IRREGULAR

MARITAL HISTORY : Married / Unmarried

OBSTETRIC HISTORY :

PAST HISTORY :

GENERAL EXAMINATION

HEIGHT :

WEIGHT / BMI :

ANEMIA	
EDEMA	
PULSE RATE	
BLOOD PRESSURE	

CVS	
RS	
PAP SMEAR	
VIA/VILI	
P/A	
P/V	

COLPOSCOPY	
REIDS INDEX	/8
SWEDE SCORE	/10
CERVICAL BIOPSY	

CONSENT FORM

“ A COMPARATIVE DIAGNOSTIC VALIDITY OF TWO COLPOSCOPIC INDICES-REIDS INDEX AND SWEDE SCORE WITH CERVICAL HISTOLOGY”

I agree to participate in the study entitled and have been informed about the details of the study in my own language.

I have completely understood the details of the study.

I am aware of the possible risks and benefits, while taking part in the study.

I understand that I can withdraw from the study at any point of time and even then, I receive the medical treatment as usual.

I understand that I will not get any money for taking part in the study.

I will not object if the results of this study are getting published in any medical journal, provided my personal identity is not revealed.

I know that I am supposed to do by taking part in this study and I assure that I would extend my full cooperation for this study.

Name of the participant:

Signature/Left thumb print:

Date:

PATIENT INFORMATION SHEET

A COMPARATIVE DIAGNOSTIC VALIDITY OF TWO COLPOSCOPIC INDICES- REIDS INDEX AND SWEDE SCORE WITH CERVICAL HISTOLOGY

We are conducting a study among patients attending Department of Obstetrics and Gynecology , Stanley Medical College . The purpose of this to correlate swede score and reids index in association with cervical histology

We are selecting patients with pap smear positive or with VIA/VILI abnormal and colposcopy will be done and scores allotted and to be compared. The privacy of the patients in the research will be maintained throughout the study. In the event of any publication or presentation resulting from the research, no personally identifiable information will be shared.

Taking part in this study is voluntary. You are free to decide whether to participate in this study or to withdraw at any time; your decision will not result in any loss of benefits to which you are otherwise entitled.

The results of the study will be intimated to you at the end of the study to aid in the management or treatment.

Signature of Investigator :

Signature of participant:S

Date:

ஒப்புதல்படிவம்

நான் இந்த ஆராய்ச்சியின் முழுவிவரம் பற்றி அறிந்து கொண்டேன். இந்த ஆராய்ச்சியில் எந்தபின்விளைவும் இல்லை என்பதை புரிந்து கொண்டேன்.

இந்த ஆராய்ச்சிக்கு எந்த பணமோ பொருளோ கிடைக்காது என்பதையும் அறிந்து கொண்டேன்.

இந்த ஆராய்ச்சியில் கேட்கப்படும் கேள்விகளுக்கு என்னால் முயன்ற வரை உண்மை விவரம் அளிப்பேன் என்பதை உறுதியளிக்கிறேன்.

என் முழுமனதுடன் இந்த ஆராய்ச்சிக்கு ஒத்துழைப்பை அளிக்கிறேன்.

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MASTER CHART

S.NO	NAME	AGE	PIN NO	COMPLAINTS	RCI	SWEDE(SIZE-SCORE)	CYTOLOGY
1	VANAMMA	58	12150	POSTMENOPAUSAL BLEEDING	7	9(16mm-2)	moderately differentiated squamous cell carcinoma
2	KALAIARASI	35	12360	LOWER ABDOMINAL PAIN	4	4(3mm-0)	chronic cervicitis
3	SUBASHINI	52	12384	WHITE DISCHARGE	3	3(2mm-0)	chronic cervicitis
4	AYESHA BEEVI	37	13653	WHITE DISCHARGE	4	4(5mm-0)	chronic cervicitis
5	GEETHA	38	13676	LOWER ABDOMINAL PAIN	3	3(4mm-0)	chronic cervicitis
6	NIRMALA	45	13987	POSTMENOPAUSAL BLEEDING	8	9(10mm-1)	well differentiated squamous cell carcinoma
7	SELVI	58	14356	WHITE DISCHARGE	2	3(15mm-1)	chronic cervicitis
8	UMERA BANU	42	14478	WHITE DISCHARGE	6	6(3mm-0)	chronic cervicitis
9	RATHI	37	14579	WHITE DISCHARGE	4	5(7mm-1)	chronic cervicitis
10	PUNITHA	52	14590	POSTMENOPAUSAL BLEEDING	8	9(14mm-1)	moderately differentiated squamous cell carcinoma
11	CHITHRA	42	14890	WHITE DISCHARGE	4	5(7mm-1)	CIN2
12	PREMA	36	15760	WHITE DISCHARGE	2	4(16mm-2)	chronic cervicitis
13	AMAIDI	48	15990	LOWER ABDOMINAL PAIN	4	4(5mm-0)	chronic cervicitis
14	MOHANASUNDARI	47	16090	LOWER ABDOMINAL PAIN	3	3(3mm-0)	chronic cervicitis
15	PAVALAKODI	47	16191	WHITE DISCHARGE	3	4(12mm-1)	chronic cervicitis
16	KALAISELVI	44	16198	WHITE DISCHARGE	2	3(10mm-1)	chronic cervicitis
17	JEMIMA	55	16209	POSTCOITAL BLEEDING	8	9(12mm-1)	moderately differentiated squamous cell carcinoma
18	ELIZABETH	42	16270	LOWER ABDOMINAL PAIN	2	4(18mm-2)	chronic cervicitis
19	RANI	44	16389	WHITE DISCHARGE	5	7(16mm-2)	CIN I
20	KALYANI	27	16478	WHITE DISCHARGE	3	3(2mm-0)	chronic cervicitis
21	KAVITHA	45	16479	POSTCOITAL BLEEDING	6	8(23mm-2)	MUCINOUS ADENOCARCINOMA
22	KALPANA	50	16589	POSTMENOPAUSAL BLEEDING	8	10(24mm-2)	moderately differentiated squamous cell carcinoma
23	MANJULA	28	16670	POSTCOITAL BLEEDING	7	8(12mm-1)	CIN II
24	LATHA	54	16676	WHITE DISCHARGE	3	4(11mm-1)	chronic cervicitis
25	EMILY PRADEEPA	54	16702	POSTMENOPAUSAL BLEEDING	8	9(14mm-1)	moderately differentiated squamous cell carcinoma
26	SHANTHI	45	16720	POSTCOITAL BLEEDING	8	8(4mm-0)	CIN II
27	VIJAYA	51	16740	WHITE DISCHARGE	2	3(7mm-1)	chronic cervicitis
28	RABIYA	51	16780	LOWER ABDOMINAL PAIN	4	4(5mm-0)	chronic cervicitis
29	SARASWATHY	22	16809	LOWER ABDOMINAL PAIN	2	4(10mm-1)	chronic cervicitis
30	NAGAMMAL	58	16880	POSTMENOPAUSAL BLEEDING	8	9(10mm-1)	moderately differentiated squamous cell carcinoma
31	VASANTHA	58	16908	POSTMENOPAUSAL BLEEDING	8	9(13mm-1)	well differentiated adenocarcinoma
32	GOWRI	37	16910	WHITE DISCHARGE	2	3(4mm-0)	chronic cervicitis
33	BULKEES	53	16999	POSTMENOPAUSAL BLEEDING	6	7(13mm-1)	CIN III
34	KARIMA BEE	32	17101	POSTCOITAL BLEEDING	8	9(15mm-1)	moderately differentiated squamous cell carcinoma
35	MANORANJITHAM	47	17272	WHITE DISCHARGE	8	9(14mm-1)	CIN III
36	VIJAYALAKSHMI	55	17390	POSTMENOPAUSAL BLEEDING	8	9(15mm-1)	moderately differentiated squamous cell carcinoma
37	AMUTHA	49	17399	WHITE DISCHARGE	6	7(9mm-1)	moderately differentiated squamous cell carcinoma
38	PARVATHI	48	17402	POSTMENOPAUSAL BLEEDING	8	10(24mm-2)	moderately differentiated squamous cell carcinoma
39	CHINNATHAI	48	17420	WHITE DISCHARGE	2	3(7mm-1)	chronic cervicitis
40	PAPATHI	55	17429	POSTMENOPAUSAL BLEEDING	6	8(16mm-2)	CIN I
41	MAJUMUNEESSA	26	17430	POSTCOITAL BLEEDING	7	9(39mm-2)	CIN III
42	PREMA	42	17480	POSTCOITAL BLEEDING	8	10(30mm-2)	moderately differentiated squamous cell carcinoma
43	SEVANTHI	45	17520	WHITE DISCHARGE	8	9(15mm-1)	moderately differentiated squamous cell carcinoma
44	BRINDHADEVI	35	17536	WHITE DISCHARGE	2	3(6mm-1)	chronic cervicitis
45	SARADHA	37	17589	WHITE DISCHARGE	1	2(10mm-1)	chronic cervicitis
46	VALARMATHY	44	17890	HEAVY MENSTRUAL BLEEDING	7	8(14mm-1)	moderately differentiated adenocarcinoma
47	MASINIYAMMAL	28	17893	WHITE DISCHARGE	3	3(4mm-0)	chronic cervicitis
48	MANGAI	38	17901	INTERMENSTRUAL BLEEDING	2	2(5mm-0)	chronic cervicitis
49	SEMBARUTHI	25	17946	WHITE DISCHARGE	2	3(8mm-1)	chronic cervicitis
50	SEETHA	60	18020	POSTMENOPAUSAL BLEEDING	5	7(20mm-2)	CIN III
51	REVATHI	55	18093	POSTMENOPAUSAL BLEEDING	6	8(30mm-2)	moderately differentiated adenocarcinoma
52	DEEPA	55	18109	WHITE DISCHARGE	2	3(13mm-1)	chronic cervicitis
53	JAYAMMA	55	18191	POSTMENOPAUSAL BLEEDING	8	10(18mm-2)	moderately differentiated squamous cell carcinoma
54	BULKEESH BEEVI	46	18209	HEAVY MENSTRUAL BLEEDING	1	2(6mm-1)	chronic cervicitis
55	SUGAMARI	35	18270	POSTCOITAL BLEEDING	2	3(7mm-1)	chronic cervicitis
56	LAKSHMI	58	18309	POSTMENOPAUSAL BLEEDING	8	10(33mm-2)	moderately differentiated squamous cell carcinoma
57	PASUMATHI	32	18497	WHITE DISCHARGE	3	4(7mm-1)	chronic cervicitis
58	VASANTHI	45	18560	POSTCOITAL BLEEDING	7	9(37mm-2)	moderately differentiated squamous cell carcinoma
59	RADHA	27	18576	WHITE DISCHARGE	2	2(2mm-0)	chronic cervicitis
60	RAVANAMMA	34	18580	WHITE DISCHARGE	2	3(6mm-1)	chronic cervicitis

61	MAHALAKSHMI	49	18670	POSTMENOPAUSAL BLEEDING	2	3(8mm-1)	chronic cervicitis
62	MAGESWARI	39	18689	WHITE DISCHARGE	3	3(2mm-0)	chronic cervicitis
63	MEENA	38	18709	WHITE DISCHARGE	1	2(7mm-1)	chronic cervicitis
64	VIMALA	47	18790	HEAVY MENSTRUAL BLEEDING	2	3(6mm-1)	chronic cervicitis
65	VELLATHAI	59	18888	POSTMENOPAUSAL BLEEDING	6	8(25mm-2)	CIN III
66	SUJA	52	18892	POSTMENOPAUSAL BLEEDING	7	9(38mm-2)	moderately differentiated squamous cell carcinoma
67	JOTHI	32	18902	WHITE DISCHARGE	2	2(5mm-0)	chronic cervicitis
68	MANIKKAM	60	18923	POSTMENOPAUSAL BLEEDING	7	9(29mm-2)	moderately differentiated squamous cell carcinoma
69	KAMALA	39	18934	INTERMENSTRUAL BLEEDING	8	10(30mm-2)	moderately differentiated squamous cell carcinoma
70	GANGA	38	18978	INTERMENSTRUAL BLEEDING	6	8(24mm-2)	moderately differentiated squamous cell carcinoma
71	GANGESWARI	60	19002	POSTMENOPAUSAL BLEEDING	7	9(21mm-2)	CIN III
72	KOMALA	32	19181	WHITE DISCHARGE	3	3(2mm-0)	chronic cervicitis
73	KAVITHA	38	19222	WHITE DISCHARGE	5	7(20mm-2)	CIN II
74	SAROJA	53	19245	POSTMENOPAUSAL BLEEDING	6	8(19mm-2)	CIN III
75	RANJITHAM	50	19257	WHITE DISCHARGE	2	2(2mm-0)	chronic cervicitis
76	MALARKODI	60	19268	POSTMENOPAUSAL BLEEDING	8	10(24mm-2)	moderately differentiated squamous cell carcinoma
77	PARIMALA	50	19390	WHITE DISCHARGE	6	7(12mm-1)	CIN III
78	SANGEETHA	43	19480	WHITE DISCHARGE	2	2(2mm-0)	chronic cervicitis
79	PARANJOTHI	48	19590	INTERMENSTRUAL BLEEDING	6	8(16mm-2)	mucinous adenocarcinoma
80	PARIJATHAM	50	19593	POSTMENOPAUSAL BLEEDING	8	10(25mm-2)	moderately differentiated squamous cell carcinoma
81	POONGODI	35	19598	WHITE DISCHARGE	5	6(12mm-1)	CIN II
82	MEENAKSHI	50	19670	WHITE DISCHARGE	7	8(14mm-1)	CIN III
83	RAMAYI	38	19689	INTERMENSTRUAL BLEEDING	8	10(22mm-2)	moderately differentiated squamous cell carcinoma
84	SAYARA BANU	50	19703	POSTMENOPAUSAL BLEEDING	8	9(19mm-2)	moderately differentiated squamous cell carcinoma
85	SAGAYAMARY	55	19714	POSTMENOPAUSAL BLEEDING	8	10(20mm-2)	moderately differentiated squamous cell carcinoma
86	RANI	50	19739	POSTMENOPAUSAL BLEEDING	8	10(19mm-2)	moderately differentiated squamous cell carcinoma
87	SANKARAYI	51	19740	INTERMENSTRUAL BLEEDING	8	10(17mm-2)	moderately differentiated squamous cell carcinoma
88	RAMZAN BEEVI	37	19780	HEAVY MENSTRUAL BLEEDING	5	6(8mm-1)	CIN II
89	VALLI	41	19867	WHITE DISCHARGE	2	2(2mm-0)	chronic cervicitis
90	VANAJA	52	19880	POSTMENOPAUSAL BLEEDING	3	4(9mm-1)	chronic cervicitis
91	WAHIDHA	48	19904	LOWER ABDOMINAL PAIN	4	4(5mm-0)	chronic cervicitis
92	KALAISELVI	47	19980	LOWER ABDOMINAL PAIN	3	3(3mm-0)	chronic cervicitis
93	SUHASHINI	47	20006	WHITE DISCHARGE	3	4(12mm-1)	chronic cervicitis
94	AYESHA BEEVI	44	20078	WHITE DISCHARGE	2	3(10mm-1)	chronic cervicitis
95	GEETHA	55	20190	POSTMENOPAUSAL BLEEDING	8	9(12mm-1)	moderately differentiated squamous cell carcinoma
96	NIRMALA	42	20197	LOWER ABDOMINAL PAIN	2	4(18mm-2)	chronic cervicitis
97	SANGEETHA	44	20230	WHITE DISCHARGE	5	7(16mm-2)	CIN I
98	RANJANI	27	20267	WHITE DISCHARGE	3	3(2mm-0)	chronic cervicitis
99	RANGAMMA	45	20278	POSTCOITAL BLEEDING	6	8(23mm-2)	mucinous adenocarcinoma
100	PARIJATHAM	50	20360	POSTMENOPAUSAL BLEEDING	8	10(24mm-2)	moderately differentiated squamous cell carcinoma
101	MOHANASUNDARI	28	20487	POSTCOITAL BLEEDING	7	8(12mm-1)	CIN II
102	JEMIMA	54	20488	WHITE DISCHARGE	3	8(11mm-1)	chronic cervicitis
103	ELIZABETH	54	20578	POSTMENOPAUSAL BLEEDING	8	9(14mm-1)	moderately differentiated squamous cell carcinoma
104	KANAGA	45	20590	POSTCOITAL BLEEDING	8	8(4mm-0)	CIN II
105	SHANTHI	51	20645	WHITE DISCHARGE	2	3(7mm-1)	chronic cervicitis
106	SUMATHI	51	20677	LOWER ABDOMINAL PAIN	4	4(5mm-0)	chronic cervicitis
107	POORANI	22	20767	LOWER ABDOMINAL PAIN	2	4(10mm-1)	chronic cervicitis
108	PANKAJAM	58	20789	POSTMENOPAUSAL BLEEDING	8	9(10mm-1)	moderately differentiated squamous cell carcinoma
109	SUMAYA BANU	58	20889	POSTMENOPAUSAL BLEEDING	8	9(13mm-1)	well differentiated adenocarcinoma
110	VASANTHI	37	20923	WHITE DISCHARGE	2	3(4mm-0)	chronic cervicitis
111	THILAGAM	53	20945	POSTMENOPAUSAL BLEEDING	6	7(13mm-1)	CIN III
112	NARGUNAM	32	20955	POSTCOITAL BLEEDING	8	9(15mm-1)	moderately differentiated squamous cell carcinoma
113	RADHIKA	47	20999	WHITE DISCHARGE	8	9(14mm-1)	CIN III
114	KAVERY	55	21111	POSTMENOPAUSAL BLEEDING	8	9(15mm-1)	moderately differentiated squamous cell carcinoma
115	MANJULA	49	21344	WHITE DISCHARGE	6	7(9mm-1)	moderately differentiated squamous cell carcinoma
116	LATHA	58	21378	POSTMENOPAUSAL BLEEDING	7	9(16mm-2)	moderately differentiated squamous cell carcinoma
117	SHANTHI	35	21454	LOWER ABDOMINAL PAIN	4	4(3mm-0)	chronic cervicitis
118	VINITHA	52	21489	WHITE DISCHARGE	3	3(2mm-0)	chronic cervicitis
119	VENGADAMMAL	37	21565	WHITE DISCHARGE	4	4(5mm-0)	chronic cervicitis
120	RAJALAKSHMI	38	21578	LOWER ABDOMINAL PAIN	3	3(4mm-0)	chronic cervicitis
121	VIJAYALAKSHMI	45	21678	POSTMENOPAUSAL BLEEDING	8	9(10mm-1)	well differentiated squamous cell carcinoma

122	NAGAMMAL	58	21775	WHITE DISCHARGE	2	3(15mm-1)	chronic cervicitis
123	KAREEMA	42	21799	WHITE DISCHARGE	6	6(3mm-0)	chronic cervicitis
124	SARADHA	37	21801	WHITE DISCHARGE	4	5(7mm-1)	chronic cervicitis
125	KUMUDHA	52	21819	POSTMENOPAUSAL BLEEDING	8	9(14mm-1)	moderately differentiated squamous cell carcinoma
126	GANGAMMAL	31	21848	WHITE DISCHARGE	5	5(2mm-0)	chronic cervicitis
127	JAYANTHI	41	21920	LOWER ABDOMINAL PAIN	3	3(4mm-0)	chronic cervicitis
128	SAROJINI	38	21940	LOWER ABDOMINAL PAIN	3	4(10mm-1)	chronic cervicitis
129	LAKSHMI	52	21967	POSTMENOPAUSAL BLEEDING	3	4(9mm-1)	chronic cervicitis
130	VALLIAMMAL	34	21989	WHITE DISCHARGE	4	4(2mm-0)	chronic cervicitis
131	VASANTHA	43	22209	LOWER ABDOMINAL PAIN	4	4(4mm-0)	chronic cervicitis
132	VASUDHARA	48	22278	WHITE DISCHARGE	2	3(8mm-1)	chronic cervicitis
133	SUGANTHI	49	22567	WHITE DISCHARGE	5	5(5mm-0)	chronic cervicitis
134	SARANYA	40	22675	LOWER ABDOMINAL PAIN	4	5(8mm-1)	chronic cervicitis
135	SANKARAMMAL	42	22789	WHITE DISCHARGE	4	5(10mm-1)	chronic cervicitis
136	LOGAMMAL	45	22880	POSTCOITAL BLEEDING	7	9(39mm-2)	CIN III
137	SANKARI	42	22909	POSTCOITAL BLEEDING	8	10(30mm-2)	moderately differentiated squamous cell carcinoma
138	LOGESWARI	45	23767	WHITE DISCHARGE	8	9(15mm-1)	moderately differentiated squamous cell carcinoma
139	THILAGAM	35	23890	WHITE DISCHARGE	2	3(6mm-1)	chronic cervicitis
140	MANIMEGALAI	37	23989	WHITE DISCHARGE	1	2(10mm-1)	chronic cervicitis
141	MANORAMA	44	24009	HEAVY MENSTRUAL BLEEDING	7	8(14mm-1)	moderately differentiated adenocarcinoma
142	PRIYA	28	24158	WHITE DISCHARGE	3	3(4mm-0)	chronic cervicitis
143	MAGESWARI	38	24268	INTERMENSTRUAL BLEEDING	2	2(5mm-0)	chronic cervicitis
144	MOHANASUNDARI	25	24367	WHITE DISCHARGE	2	3(8mm-1)	chronic cervicitis
145	JAYA	60	24444	POSTMENOPAUSAL BLEEDING	5	7(20mm-2)	CIN III
146	THANGAM	55	24566	POSTMENOPAUSAL BLEEDING	6	8(30mm-2)	moderately differentiated adenocarcinoma
147	MANGAI	55	24575	WHITE DISCHARGE	2	3(13mm-1)	chronic cervicitis
148	RADHA	56	24677	POSTMENOPAUSAL BLEEDING	8	10(18mm-2)	moderately differentiated squamous cell carcinoma
149	MYTHILI	46	24789	HEAVY MENSTRUAL BLEEDING	1	2(6mm-1)	chronic cervicitis
150	PASUMATHI	35	24889	POSTCOITAL BLEEDING	2	3(7mm-1)	chronic cervicitis
151	AYESHA	58	24909	POSTMENOPAUSAL BLEEDING	8	10(33mm-2)	moderately differentiated squamous cell carcinoma
152	ASINA BEGUM	32	25658	WHITE DISCHARGE	3	4(7mm-1)	chronic cervicitis
153	ASINA	45	25766	POSTCOITAL BLEEDING	7	9(37mm-2)	moderately differentiated squamous cell carcinoma
154	KUMUDHA	27	25776	WHITE DISCHARGE	2	2(2mm-0)	chronic cervicitis
155	SHENBAGAM	34	25886	WHITE DISCHARGE	2	3(6mm-1)	chronic cervicitis
156	SUMATHI	49	25890	POSTMENOPAUSAL BLEEDING	2	3(8mm-1)	chronic cervicitis
157	GOWRI	39	25989	WHITE DISCHARGE	3	3(2mm-0)	chronic cervicitis
158	NIRMALA	38	26023	WHITE DISCHARGE	1	2(7mm-1)	chronic cervicitis
159	MUTHAMMAL	47	26680	HEAVY MENSTRUAL BLEEDING	2	3(6mm-1)	chronic cervicitis
160	DEEPA	59	26798	POSTMENOPAUSAL BLEEDING	6	8(25mm-2)	CIN III
161	DEEPAMMAL	52	26890	POSTMENOPAUSAL BLEEDING	7	9(38mm-2)	moderately differentiated squamous cell carcinoma
162	DEVASANAI	32	26909	WHITE DISCHARGE	2	2(5mm-0)	chronic cervicitis
163	DEIVANAI	60	27790	POSTMENOPAUSAL BLEEDING	7	9(29mm-2)	moderately differentiated squamous cell carcinoma
164	SUBASHINI	39	27889	INTERMENSTRUAL BLEEDING	8	10(30mm-2)	moderately differentiated squamous cell carcinoma
165	MAGIMAI	38	28090	INTERMENSTRUAL BLEEDING	6	8(24mm-2)	moderately differentiated adenocarcinoma
166	ABIRAMI	60	28198	POSTMENOPAUSAL BLEEDING	7	9(21mm-2)	CIN III
167	SOWDAMBIKA	32	28409	WHITE DISCHARGE	3	3(2mm-0)	chronic cervicitis