Treatment of Cervical Precancer using Thermal Ablation and LEEP

Agenda – Treatment of Cervical Precancer using Thermal Ablation

Topics	Time (minutes)
Treatment of CINs	10
Section 1 – Treatment by Thermal Ablation	10
Section 2- SOP for Thermal Ablation	15
Section 3 – Post Thermal Ablation	15
Thermal Ablation Video	5
Open House	10
Total	**65**

Treatment of Cervical Intraepithelial Neoplasia (CIN)

Cervical premalignant lesions can be treated either by an ablative method (cryotherapy or thermal ablation) or by excision, depending on certain criteria

Principles of treatment of cervical intraepithelial neoplasia (CIN)-

1. The entire transformation zone undergoes HPV-induced clonal change and is at risk of developing CIN. Therefore, the whole TZ should be treated (ablated or excised), irrespective of the size of the lesion

2. High-grade CIN lesions often extend into the crypts present in the TZ. The depth of the crypts can be up to 5 mm. During ablative treatment, the tissue destruction must extend up to 7–8 mm to ensure complete clearance of disease

3. Low-grade lesions/CIN1 lesions should be treated when follow-up is not guaranteed

4. CIN2 and CIN3 lesions should always be treated except in very young women (younger than 25 years)

5. The decision to treat a CIN lesion may be based on colposcopic findings (“see and treat”) without waiting for histological verification

6. Ablative or excisional treatment can be performed for VIA- or HPV -positive women without colposcopic or histological verification (“screen and treat”) in situations where these diagnostic services are not available

Section 1 – Introduction to Thermal Ablation

Learning Objectives

1. Understand Principle of Thermal Ablation
2. Identify eligibility criteria for treatment with Thermal Ablation
3. Identifying requirements for Thermal Ablation at health facility

Treatment by Thermal Ablation - Principle

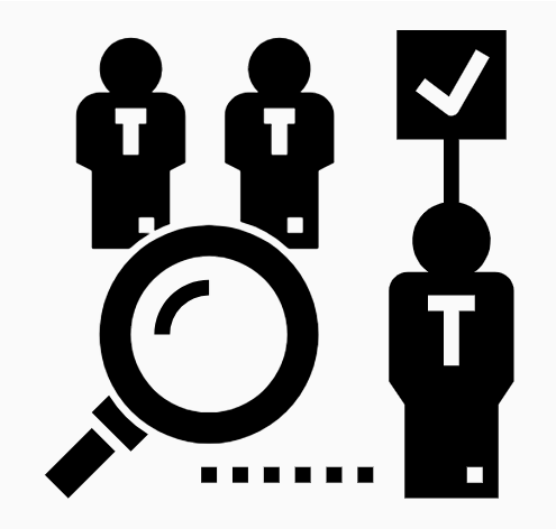
- Thermal ablation is safe and acceptable procedure, alternative to cryotherapy
- A probe heated to 100°C- 110°C destroys the abnormal lesions by direct contact of the ectocervix (destructive therapy)
- Multiple applications of the probe to ectocervix are feasible with thermal ablation
- The ectocervix has sparse sensory nerve endings. As a result, an ectocervical procedure like thermal ablation/cryotherapy does not require any anesthesia

Since multiple applications of probe are possible, unlike cryotherapy, the technique is not limited by the disparity between the size of the lesion and that of the probe

Indications for Thermal Ablation (Same as Cryotherapy)

VIA test-positive women are eligible for Thermal Ablation/Cryotherapy if –

1. Entire lesion is visible on ectocervix
2. Lesion is not extending to the endocervical canal or to vagina
3. Lesion is occupying less than 75% of the ectocervix
4. No evidence or suspicion of cancer or glandular abnormality
5. Woman should not be pregnant at the time of treatment
6. Woman should not be menstruating at the time of treatment
7. Woman should not have pelvic inflammatory disease at the time of treatment
8. If the woman has recently delivered, she is at least 3 months post-partum
9. Endocervical canal is normal and there is no evidence of glandular dysplasia



Equipment and Consumables for Thermal Ablation

Equipment

- TA Unit
- Examination table
- Light source
- Cusco's speculum
- Sponge holding forceps

Consumables

- Disposable gloves
- Cotton swabs for wiping the cervix
- Normal saline solution
- Dilute Acetic acid (5%) solution (freshly prepared)
- Lugol's Iodine
- Lubricant jelly
- 0.5% chlorine solution

Section 1 – Introduction to Thermal Ablation

Learning Outcomes

1. TA is an ablative method for treatment of ectocervical precancerous lesions
2. A probe heated to 100°C- 110°C destroys the abnormal lesions by direct contact
3. Multiple application of TA probe to ectocervix are possible
4. The entire lesion should be visible on the ectocervix, occupying less than 75% of ectocervix with no suspicion of cancer

Section 2 – SOP for Thermal Ablation

Learning Objectives

1. Perform the technique of Thermal Ablation following the correct steps

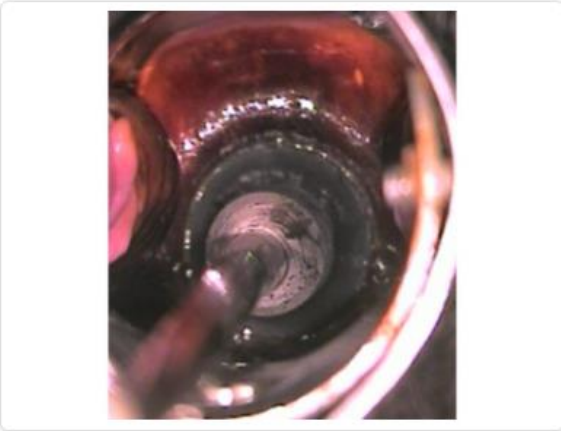
2. Follow infection prevention practices during Thermal Ablation

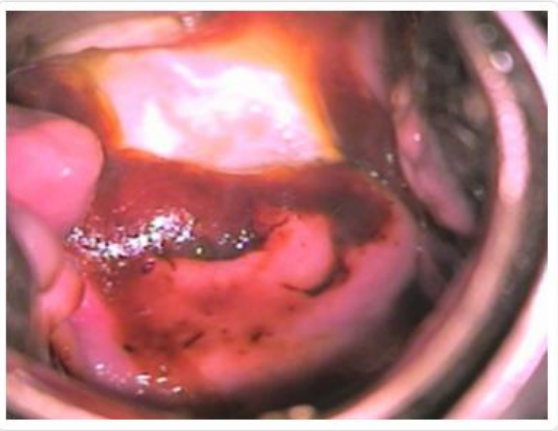
SOP for Thermal Ablation

- Counsel the woman, ensure that the woman has understood the procedure and obtain informed written consent
- Ensure that woman has emptied her bladded
- Re-evaluate the lesion and ensure that:
  - The lesion is completely in ectocervix, without extension to endocervix and/or vagina
  - The lesion does not extend to more than 75% of the cervix
  - The lesion does not have any features suspicious of cancer
- Check that instruments, supplies and light source are available and ready to use
- Expose the cervix gently using the cusco's speculum
- Focus light source for clear visualization of cervix
- Moisten the cervix with a saline-soaked cotton swab, for good thermal conduction
- ***Apply 5% acetic acid on cervix for 1 min to outline the abnormality and identify-***
  - Squamocolumnar junction
  - Limits of the lesion
  - TZ and area to treat
- Application of 5% acetic acid to be followed by application of lugol's iodine to delineate the limits of the lesion

SOP for Thermal Ablation

- Apply the probe to the TZ so that the centre of the tip is on the external os
- ***Maintain the temperature at 100 °C constantly***
- The formation of small bubbles around the probe indicates that thermal coagulation is taking place
- Keep the probe in contact with the TZ for 45 seconds
- Withdraw the probe from the cervix after 45 seconds; a crater will be visible





- If the entire TZ is not covered by a single application, apply the probe to another part of the cervix and treat for 45 seconds (up to 5 overlapping applications can be made)
- Switch off the machine once the applications are complete

SOP for Thermal Ablation

- Remove the probe carefully so that the hot probe does not touch the vaginal walls
- Remove the speculum gently
- Ask the woman to continue lying down for 5 minutes before getting up
- Counsel the woman and give appropriate follow-up advice
- Document treatment completion in reporting register
- Provide her the date for next follow up and emphasize on the importance of it

Section 2 – SOP for Thermal Ablation

Learning Outcomes

1. Informed and written consent should be obtained for Thermal Ablation
2. Check that TA unit and other equipment and consumables are ready for use before procedure
3. Apply 5% dilute acetic acid and identify, followed by application of Lugol's iodine prior to treatment:
    - SCJ
    - TZ and area to treat
    - Limits of the lesion

4. Apply the probe to the TZ so that the centre of the tip is on the external os, maintain the temperature at 100 °C constantly
5. Take precautions so that the probe tip does not inadvertently touch any part of the vagina
6. Advise about post-treatment care and follow-up instructions
7. Complete the documentations to record the treatment

Section 3 – Post Thermal Ablation

Learning Objectives

1. Recognize probable treatment complications
2. Correctly decontamination all equipment post TA procedure
3. Offer appropriate management of complications
4. Perform appropriate follow-up after treatment

Side Effects and Complications

Thermal Ablation is a safe procedure with no significant operative morbidity. The possible side-effects and complications are (same as cryotherapy) -

- A little discomfort or cramping in the lower abdomen during and after the procedure
- Watery vaginal discharge for 2-4 weeks (shorter duration than cryotherapy)
- Pelvic infection, requiring antibiotics and supportive treatment – ***rare***
- Excessive bleeding, requiring hospital admission or blood transfusion – ***extremely rare***
- Stenosis of the cervix (late complication) – ***extremely rare***

Some women may feel light-headed if they get up from the table immediately after the procedure. Ask the woman to continue lying on the bed for 5–10 minutes after the procedure, to avoid this side-effect

Post-Treatment Care

- Inform the woman that she may have watery vaginal discharge (that can be blood-stained also) for about 4 weeks
- Advise her to use sanitary napkins to avoid staining her clothes
- Advise the woman to avoid sexual intercourse for about 4 weeks
- Advise her not to use vaginal tampons for 4 weeks
- Ask the woman to report to the health facility if she suffers from any of the following symptoms within 4 weeks of treatment:
  - fever with temperature >38 °C with chills and rigors
  - foul smelling purulent vaginal discharge
  - severe lower abdominal pain/cramps
  - vaginal bleeding for more than 2 days or with clots (except during expected time of menstruation)
- Inform the woman that she should return for follow-up after 1 year

Decontaminate TA Unit

After treatment by TA, the probe should be sterilized thoroughly before re-using it. Steps to sterilize are as follow-

- Decontaminate the probe by wiping with ethyl alcohol 60–90%
- Dip the probe in clean water
- Scrub any visible biological matter on the probe tip with a cotton swab and wash with clean water
- Soak the probe in any one of the following chemicals:
  - 0.1% chlorine solution for 20 minutes
  - 2% glutaraldehyde for 20 minutes
  - 6% hydrogen peroxide solution for 30 minutes
- Rinse the probe thoroughly with sterile water
- Air-dry or dry it with a sterile cloth Clean the probe shaft and the rest of the TA unit by wiping with cotton soaked in 60–90% ethyl or isopropyl alcohol

Follow-up after Thermal Ablation

- The woman may be advised to come back for a check-up after 1 month to exclude infection or other complications
- No screening or speculum examination or colposcopy should be done
- The biopsy report, if available, should be reviewed. In a screen-and-treat programme, this follow-up visit is often omitted
- The next check-up should be done after 8–12 months, when the woman may have the screening test originally performed or a direct colposcopic examination
- If there is a persistent lesion at follow-up, it is preferable to excise the lesion, although TA/cryotherapy may be repeated if the usual criteria for TA/cryotherapy are fulfilled

Treatment side effects/ complications during TA and their Management

Side Effect	Management
Cramping during treatment	• Counsel the woman before the procedure to expect some degree of cramping during and after the procedure • Cramping can be reduced by giving a mild analgesic like paracetamol orally half an hour before treatment • Analgesics can be given after the procedure, if the woman complains of persistent pain
Vaginal pain due to inadvertent touching of the vagina with a heated probe	• Make the woman lie down for about 30 minutes • Give her analgesic tablets like paracetamol or ibuprofen • Reassure her and make sure she is feeling all right before letting her go
Vaginal discharge (profuse, watery)	• Reassure the woman that this is expected after treatment • Ask her to use sanitary napkins for comfort
Acute pelvic inflammatory disease	• Send swab from vaginal discharge for culture, if feasible • Start empirical treatment with antibiotics • Give supportive treatment
Spotting/light bleeding	• Reassure the woman that this is expected after treatment • Ask her to use sanitary napkins for comfort

Advantages and Limitations of Thermal Ablation

Advantages	Limitations
Effective in treating CIN	Destruction leaves no tissue sample for confirmatory diagnosis
No anesthesia or hospitalization required	Difficult to determine the exact amount of tissue destroyed
No noise/smoke/smell of burning tissue during treatment	Expensive equipment
Multiple applications to cover a big lesion is possible	
Does not require continuous supply of refrigerants	
Short treatment time	
Associated with few side effects and complications	
Easy sterilization of the probe	
Easy portability as equipment is light weight	

Section 3 – Post Thermal Ablation

Learning Outcomes

1. Watery discharge or spotting can occur until 4 weeks after TA

2. Complete abstinence should be followed for 4 weeks after the procedure

3. Follow-up is recommended after 1 year of the treatment

4. The woman should report immediately if she has any of the following symptoms:
    - foul smelling discharge
    - fever of more than 38 °C
    - heavy vaginal bleeding or severe lower abdominal pain occur within 4 weeks of treatment

Agenda – Treatment of Cervical Precancer using LEEP

Topics	Time (minutes)
Section 1 – LEEP Principle	10
Section 2- SOP for LEEP	15
Section 3 – Post LEEP	15
LEEP Video	15
Open House	10
Total	**65**

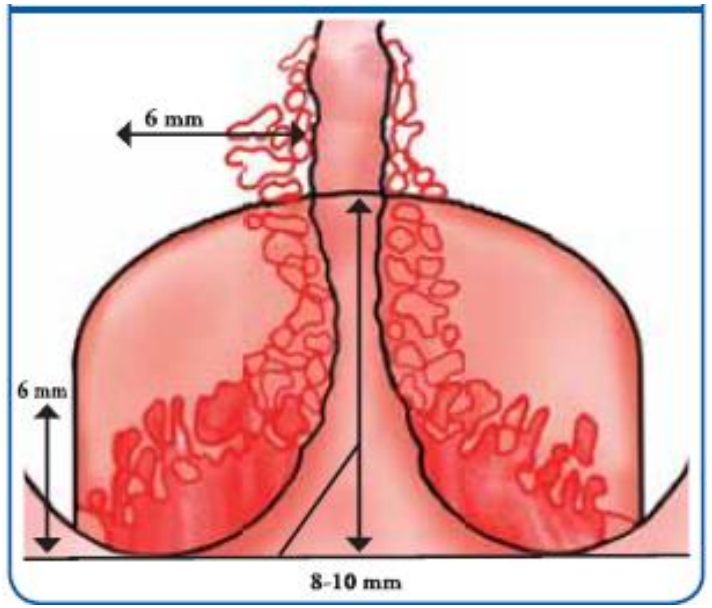
Section 1 – Introduction to LEEP

Learning Objectives

1. Understand Principle of LEEP
2. Identify eligibility criteria for treatment with LEEP
3. Identify requirements for LEEP at health care facility

Treatment by LEEP- Principle

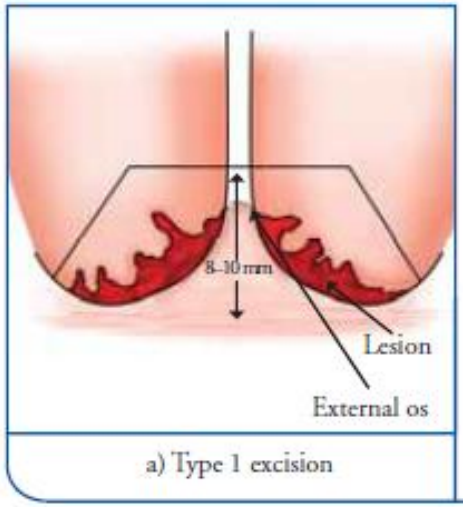
- LEEP is an excisional method of treating CIN
- A wire loop electrode powered by an electrosurgical unit is used to remove the entire TZ along with the lesion
- Heat from a high voltage electrical arc between the operating electrode and tissue allows the operator to cut by vaporizing the tissue
- Excision of the TZ treats the abnormality effectively and provides a specimen for detailed histological evaluation
- Width of the loop ranges from 10 mm to 20 mm and the depth ranges from 10 mm to 15 mm
- Appropriate size of the loop is chosen to achieve adequate depth and width of the cut depending on the size and position of the lesion
- Since the disease can extend along the crypts of the TZ and the average depth of a crypt is 5 mm, the extent of excision should be at least 8 mm to 10 mm to get an adequate disease-free margin



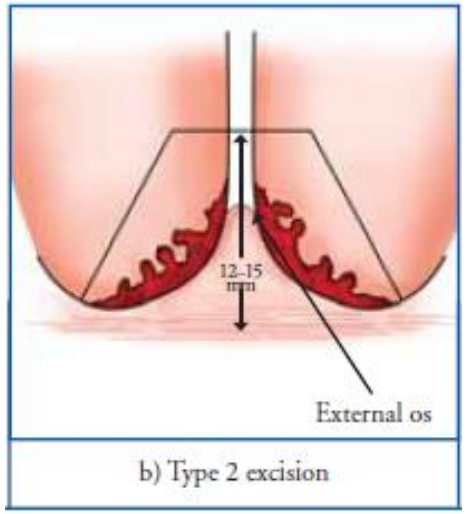
Extent of excision necessary to treat CIN lesions

Types of Excision

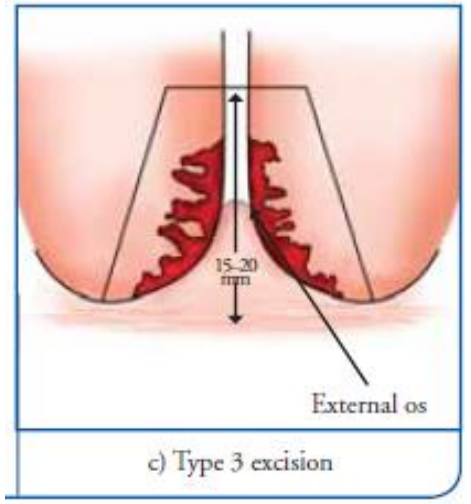
The type of excision depends on the type of TZ and the extent and nature of the lesion



- **Type 1 excision:** Involves excision of Type 1 TZ
- Doesn't include much of the endocervical canal
- *Type 1 excision is adequate for CIN 2/3 lesions if the SCJ is fully visible on the ectocervix*



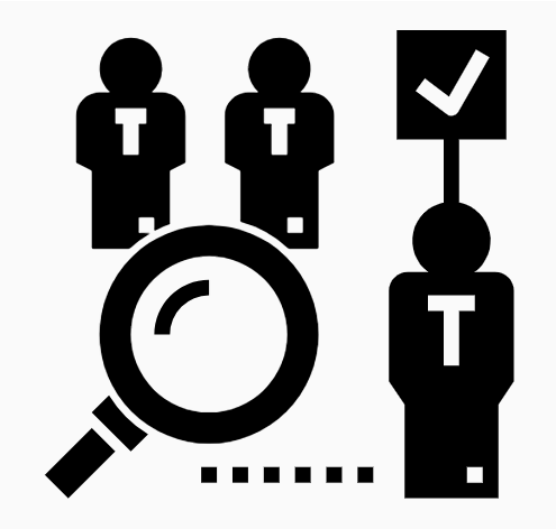
- **Type 2 excision:** Involves excision of Type 2 TZ
- Includes endocervical component of the TZ depending on the extent of the lesion inside the endocervical canal
- *Type 2 excision is indicated if there is a CIN 2/3 lesion extending to the endocervical canal and the upper margin of the lesion is clearly visible*



- **Type 3 excision:** Involves excision of Type 3 TZ
- Involves a significant amount of the endocervical canal is excised (1.5 cm to 2 cm) as the upper limit of the TZ or the lesion is not visible
- *Type 3 excision is required for CIN 2/3 lesions with Type 3 TZ or glandular lesion or micro invasive cancer*

Indications for LEEP

1. CIN of any grade
2. Lesions not amenable to treatment by ablative techniques
3. Discordance between the cytology, colposcopy and punch biopsy, especially if a high-grade disease is suspected
4. High grade squamous intraepithelial lesion (HSIL) on cytology; colposcopy normal with Type 3 TZ
5. Glandular abnormality on cytology, punch biopsy or endocervical curettage
6. Treatment failures (after ablative or excision procedure)
7. Woman should not be pregnant at the time of treatment
8. If the woman has recently delivered, she is at least 3 months post-partum
9. No Severe infection/inflammation of cervix



Equipment and Consumables for LEEP

Equipment

- LEEP Unit
- Smoke evacuator with tubing for attachment to speculum
- Colposcope
- Examination table
- Light source
- Cusco's speculum
- Sponge holding forceps

Consumables

- Normal saline solution
- Dilute Acetic acid (5%) solution (freshly prepared)
- Lugol's Iodine
- Lubricant jelly
- Monsel's paste
- Local anaesthetic (1 or 2 % lignocaine) with or without 1:100 000 epinephrine
- Vials containing 10% formaldehyde
- 0.5% chlorine
- Syringe for injecting local anaesthetic (dental syringe preferred)
- Disposable gloves
- Cotton swabs for wiping the cervix

LEEP Unit

Section 1 – Introduction to LEEP

Learning Outcomes

1. To perform the LEEP procedure a wire loop electrode powered by an electro-surgical unit is used to remove the entire TZ along with the lesion

2. LEEP can be used to treat CIN of any grade, lesions not amenable to treatment by ablative techniques, the cervix with discordant cytology, colposcopy and punch biopsy reports especially if high grade disease is suspected or there is suspected glandular abnormality

3. Contraindications to LEEP include pregnancy, severe infection/inflammation of the cervix and less than 3 months postpartum

Section 2 – SOP for LEEP

Learning Objectives

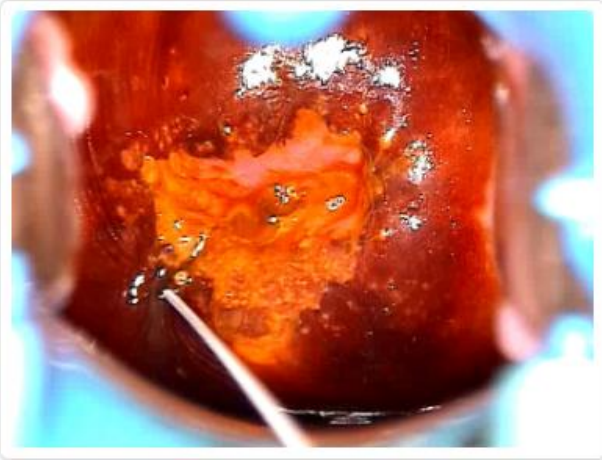
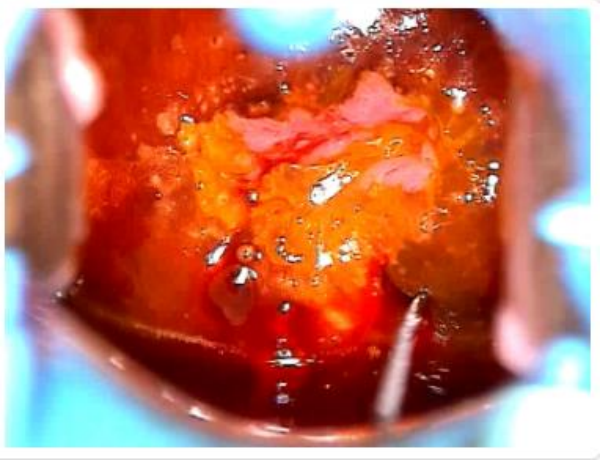
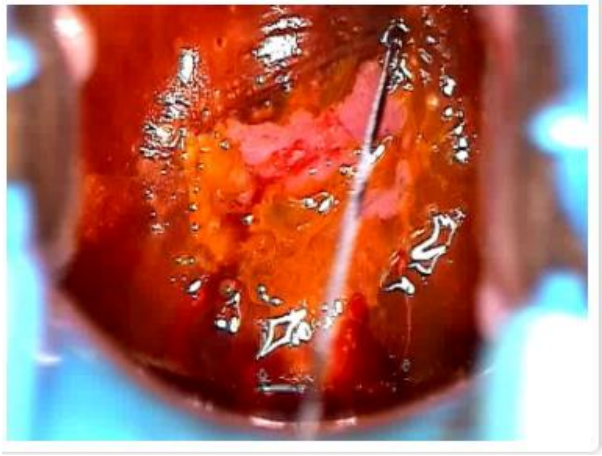
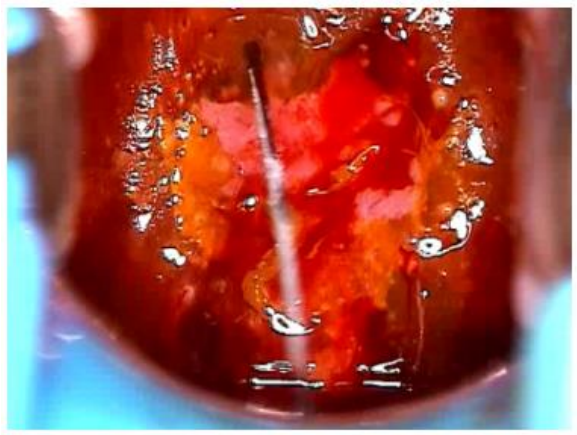
1. Perform the technique of LEEP following the correct steps
2. Follow infection prevention practices during LEEP

SOP for LEEP (1/4)

S. No	Activity
Pre-LEEP counselling	
1	Counsel the woman
2	Explain to the woman why the treatment is recommended and describe the procedure
3	Tell her about the side effects she may expect and the alternatives to LEEP
4	Listen to her problems and concerns and respond to her queries
5	Ensure that the woman is not pregnant
6	**Obtain written informed consent for LEEP**
Getting ready	
7	Check that instruments, supplies and colposcope are available and ready to use
8	Check that the ESU and the smoke evacuator are ready for use
9	Check that the woman has recently (not more than 30 minutes previously) emptied her bladder
10	Help her onto the examining table, help her to undress and drape her
11	**Place a reusable patient return electrode under her buttocks or on her thigh and connect it to the ESU**
12	Wash hands thoroughly and air dry them
13	Put on new examination or high-level disinfected surgical gloves
14	Arrange instruments and supplies on a high-level disinfected tray or container

SOP for LEEP (2/4)

Doing the procedure	
15	Insert an appropriately sized insulated speculum with smoke extraction channel and fix blades so that the entire cervix can be seen clearly
16	Connect the smoke evacuator tubing to the insulated speculum, place a lateral vaginal wall retractor, if required
17	Adjust colposcope to focus clearly on the cervix
18	Apply 5% dilute acetic acid and identify- Squamocolumnar junction, TZ and area to treat, Limits of the lesion
19	**Apply Lugol's iodine to delineate the lesion clearly**
20	Inject a local anaesthetic agent (5–7 mL of 1% lignocaine with adrenaline) into the stroma of the ectocervix (just beneath the epithelium) in a ring pattern at the periphery of the lesion. Avoid the 3 o'clock and 9 o'clock positions, because you may encounter a branch of the descending cervical artery

SOP for LEEP (3/4)

Doing the procedure	
21	Set the power setting of the ESU to a blend of 50 watts of coagulation and 50 watts of cutting currents
22	Select an appropriately sized loop depending on the size and endocervical extent of the lesion so as to remove the lesion with minimum number of passes
23	Introduce the loop into the tissue 2–3 mm outside the outer margin of the lesion (either left or right or lower margin, but not the upper margin) and activate the ESU by pressing the cutting switch
24	**Direct the loop gradually into the cervix until the cross bar nearly comes in contact with the epithelial surface**
25	**Guide the loop parallel to the surface of the cervix across the endocervical canal till the opposite outer margin of the lesion is reached**
26	Gradually withdraw the loop and, as soon as it is out of the tissue, release the switch to stop the ESU
27	Remove the excised tissue with a pair of forceps
28	Fulgurate the defect on the cervix with a ball electrode using the pure coagulation current from the ESU to control the bleeding
29	If necessary, use multiple passes to remove the lesion entirely
30	**Remove blood and clots from vagina and smear Monsel's paste on the treated area**
31	Remove return electrode. Remove speculum and place in 0.5% chlorine solution for 10 minutes
32	Help the woman to get up from examination table and sit comfortably

SOP for LEEP (4/4)

Post-LEEP tasks	
33	Dispose-off the swabs and other disposable items in appropriate disposal bags
34	Immerse both gloved hands in 0.5% chlorine solution. Remove gloves by turning them inside out: • If disposing-off the gloves, place in leak-proof container or plastic bag. • If reusing surgical gloves, submerge in 0.5% chlorine solution for 10 minutes for decontamination
35	Wash hands thoroughly with soap and water and air dry them
36	Check to be sure the woman is not having any discomfort or bleeding
37	**Advise her about post-treatment care and follow-up instructions**
38	Document the treatment done in the case record form along with the follow-up plan

Section 2 – SOP for LEEP

Learning Outcomes

1. Informed and written consent should be obtained for LEEP
2. Check that LEEP unit and other equipment and consumables are ready for use before procedure
3. Apply 5% dilute acetic acid and identify, followed by application of lugol's iodine prior to treatment:
    - SCJ
    - TZ and area to treat
    - Limits of the lesion
4. During the procedure, direct the loop gradually into the cervix until the cross bar nearly comes in contact with the epithelial surface
5. Guide the loop parallel to the surface of the cervix across the endocervical canal till the opposite outer margin of the lesion is reached
6. Advise about post-treatment care and follow-up instructions
7. Complete the documentations to record the treatment

Section 3 – Post LEEP

Learning Objectives

1. Recognize probable treatment complications
2. Correctly decontamination all equipment post LEEP
3. Offer appropriate management of complications
4. Perform appropriate follow-up after treatment

Side Effects and Complications

- Excessive bleeding during or immediately after surgery (usually can be controlled by diathermy, fulguration and/or by applying Monsel's paste)
- Secondary haemorrhage due to post-operative infection
- Post-operative infection/PID (characterized by presence of foul-smelling yellowish discharge or blood mixed discharge and/or fever and/or pain. Appropriate management with antibiotics and other anti-inflammatory medicines is indicated)
- Cervical stenosis
- Cervical incompetence
- Premature rupture of membranes and pre-term labour in subsequent pregnancies

Management of Secondary Haemorrhage after LEEP

- Admit for observation
- Appropriately resuscitate if heavy bleeding
- Coagulate bleeding points using ball electrode
- Apply Monsel's paste
- Apply tight vaginal pack if bleeding still persists and remove after 24 hours
- Start antibiotics
- In rare cases, cervical stitches are required to control bleeding

Post-Treatment Care

- Inform the woman about the expected symptoms like watery discharge or blood-stained discharge for about 4 weeks
- Advise her to use sanitary napkins, as required, to avoid staining of clothes
- Advise her to avoid sexual intercourse for about 4 weeks (or to use condoms if sexual intercourse can not be avoided)
- Advise her to not use vaginal tampons or douche for about 4 weeks
- Advise her to attend for check-up after 1 month when the histology report would be available
- Advise her to report back if she has any of the following symptoms within 4 weeks of treatment:
    - fever for more than 2 days;
    - foul smelling purulent vaginal discharge;
    - severe lower abdominal pain/cramps;
    - vaginal bleeding heavier than menstrual bleeding;

Follow-up after LEEP

- Histopathology report of the excised specimen should be carefully evaluated to see whether there is any suggestion of invasive cancer and whether the margins are positive (affected by CIN)
- Cases with invasive cancer on histopathology should be appropriately managed or referred
- Women with a positive margin on the LEEP specimen need individualized management
    - Those with CIN 2, CIN 3, microinvasive cancer, or glandular disease on the inner margin (endocervical and stromal) need evaluation for repeat LEEP or hysterectomy
    - Those with CIN detected on the ectocervical margin of the cone need follow-up only
    - Those with persistent disease at first follow-up after 8–12 months need a repeat excision after carefully ruling out invasive cancer

Maintenance and Safety Precautions for LEEP

- User should read, understand and follow the operating instructions supplied with the electrosurgical unit
- Electrosurgery should not be done in the presence of flammable gases, flammable liquids or flammable objects in oxygen-enriched atmospheres or in the presence of other oxidizing agents
- Old or worn accessories should not be used
- Safety checks should be performed at least every 24 months by a qualified person who has adequate training, knowledge and practical experience to perform these tests
- The equipment should be decontaminated at the end of the day and kept properly covered to avoid dust

Common Problems Encountered during LEEP and their Management

Problems	Reason	Suggested solution
Difficult exposure of the cervix	• Laxity of vaginal walls	• Put a non-lubricated condom or the cut finger of a glove on the speculum • Insert lateral vaginal wall retractors
Patient feels pain during cutting	• Inadequate infiltration of local anaesthetic • Poor contact with patient return electrode (dispersive plate)	• Inject sufficient local anaesthetic • Adjust patient return electrode (dispersive plate) so as to establish a complete electrical circuit and prevent electrical burns to the patient
Loop does not cut properly/ gets stuck while cutting	• Inappropriate power setting of the diathermy machine	• Choose the power setting that is appropriate for that particular diathermy machine. Ideally this should be predetermined, and the machine set accordingly before starting the procedure • Increase the cutting power gradually, 5W each time, till the loop starts excising the tissue smoothly
Field of vision is obscured due to smoke	• Smoke evacuation system malfunctioning	• Check the smoke evacuator tube and change if necessary

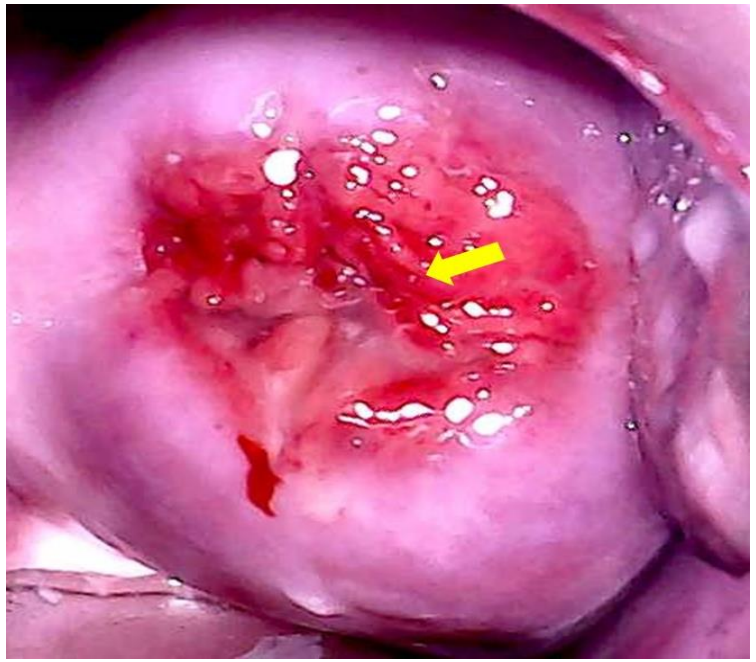
Advantages and Limitations of LEEP

Advantages	Limitations
Simple outpatient procedure	Requires more skill than ablative techniques
High efficacy	Small risk of bleeding during and after the procedure
Tissue available for histological evaluation	Small risk of adverse obstetric outcome
Can be performed under local anaesthesia	
Minimal complications	

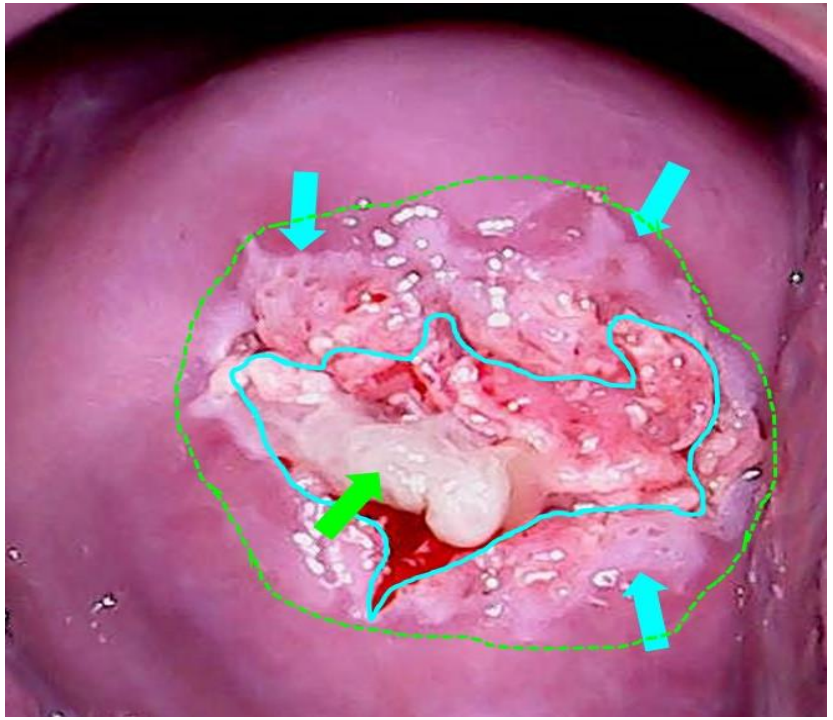
Case Studies

Identify Treatment Modality for the Lesion

Cervix BEFORE application of 5% acetic acid



Cervix AFTER application of 5% acetic acid



Cervix BEFORE application of 5% acetic acid

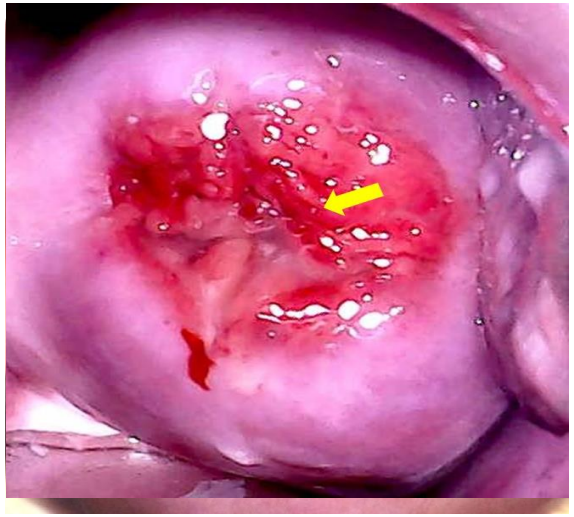


Fig: 6.1

Yellow arrow: Columnar epithelium

Red columnar epithelium is visible around the external os.

Cervix AFTER application of 5% acetic acid

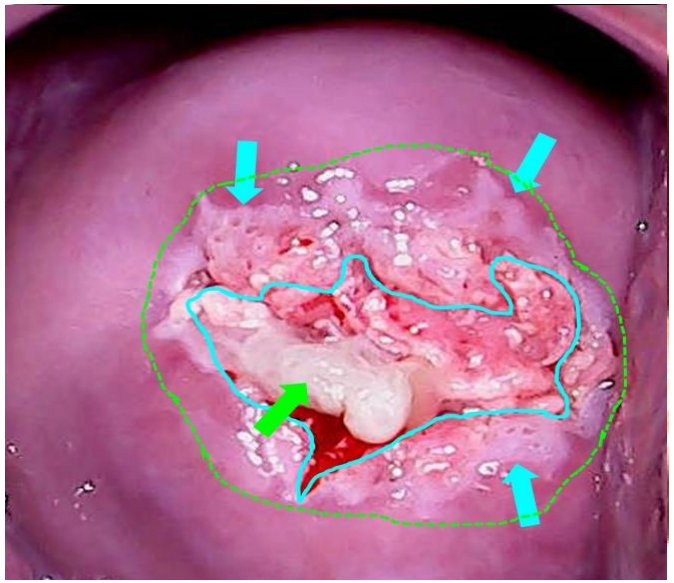


Fig: 6.2

Blue line: SCJ
Blue arrows: Acetowhite areas

Green arrow: Mucus
Green line: Outer limit of TZ

Thin acetowhite areas with irregular margins are seen on the anterior lip (at the 10–1 o'clock position) and the posterior lip (at the 4 o'clock position

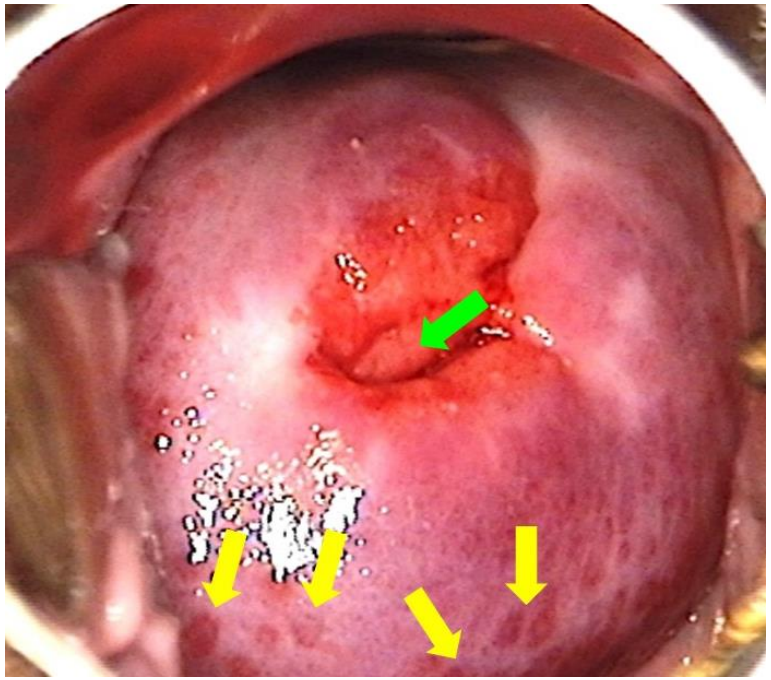
Type of Transformation Zone : **Type 1**

Were acetowhite patches visible on the cervix after application of 5% acetic acid? if yes, observe characteristics

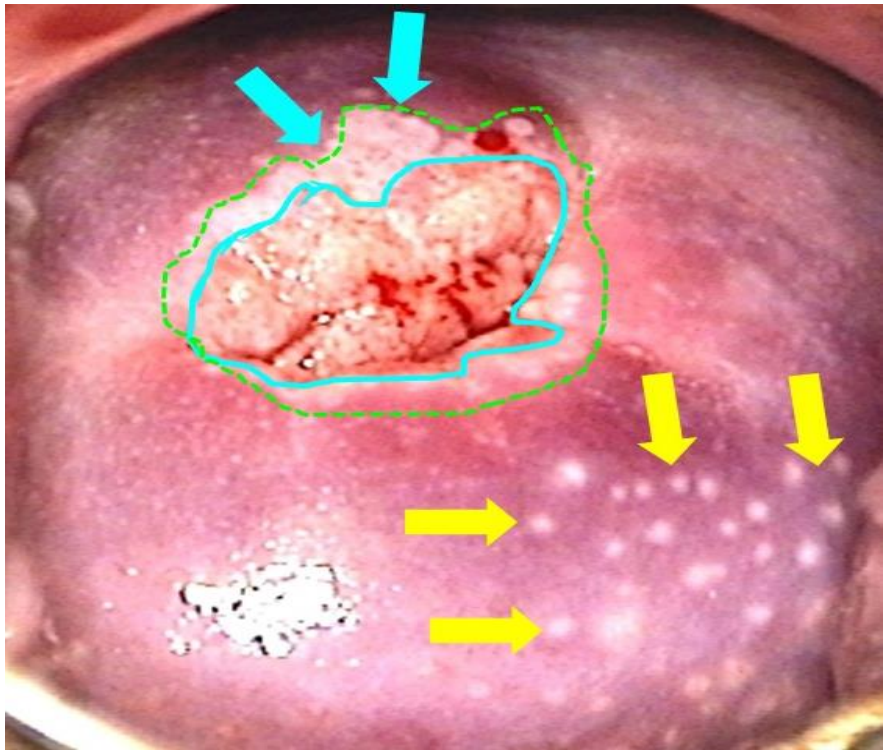
Characteristics of Acetowhite Lesions	VIA Interpretation
Speed of Appearance	Appeared immediately and stayed for more than a minute
Colour Intensity	Opaque/Dull/Cloudy White
Margins and Demarcations	Distinctly clear, raised margin
Colour Uniformity	Distinct white patch on cervix, not blending with rest of the cervix
Location	Arising from SCJ, In transformation zone
VIA Result	**VIA Positive**
Management	***Lesion eligible for ablative treatment as-*** ✓ *SCJ fully visible on ectocervix* ✓ *Lesion occupy less than 75% of ectocervix* ✓ *No Suspicion of invasive cancer* ✓ *Lesion do not extend to vagina or endocervical canal* ***(The thick white mucus plug at the external os should not be mistaken for an acetowhite area)***

Identify Treatment Modality for the Lesion

Cervix BEFORE application of 5% acetic acid



Cervix AFTER application of 5% acetic acid



Cervix BEFORE application of 5% acetic acid

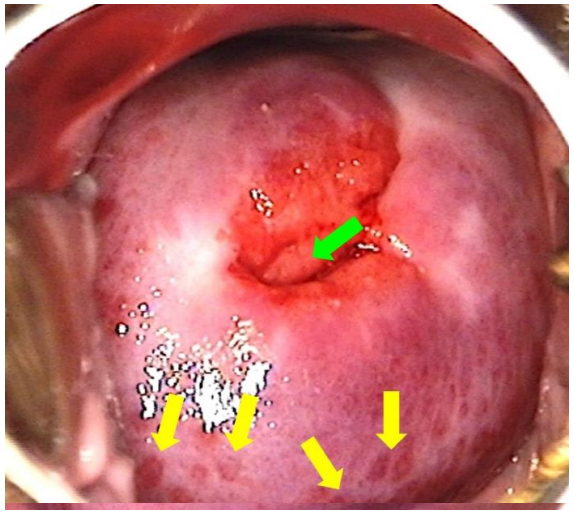


Fig: 7.1

Green arrow: Polyp

Yellow arrows: Strawberry appearance

A few red patches are visible on the posterior lip, giving rise to strawberry appearance of the cervix.

Cervix AFTER application of 5% acetic acid

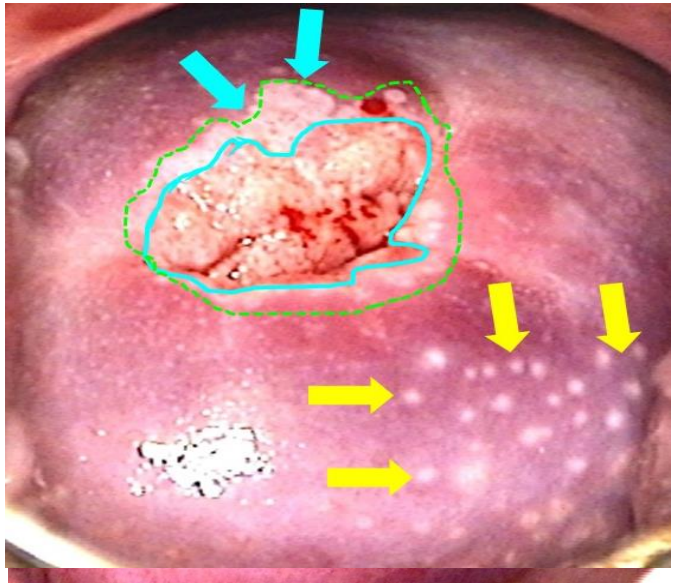


Fig: 7.2

Blue line: SCJ
Blue arrows: Acetowhite area
Yellow arrows: Scattered white dots

A thin acetowhite area with irregular margins and attached to the SCJ is seen on the anterior lip (at the 10–12 o'clock position). The multiple scattered white dots on the posterior lip are due to cervicitis

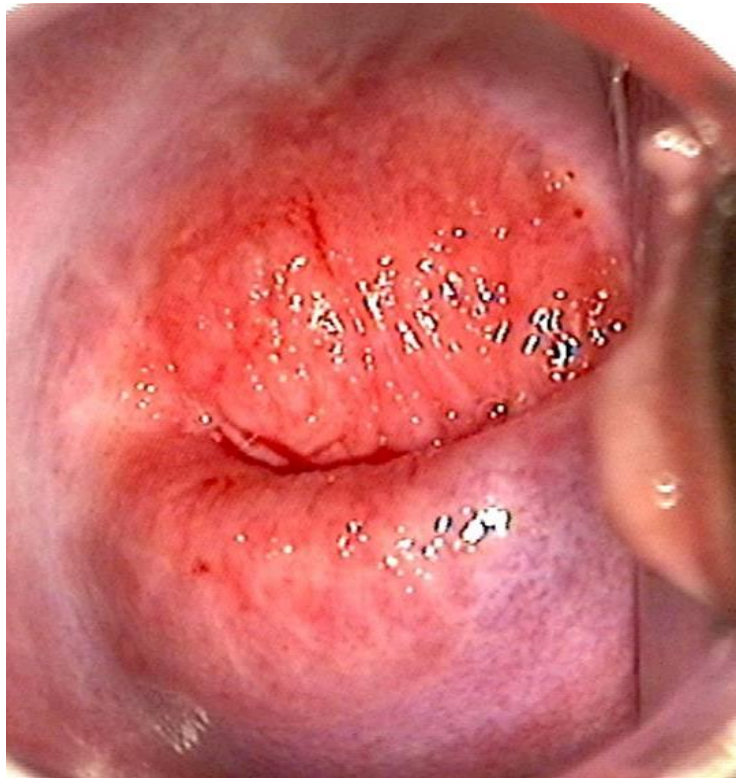
Type of Transformation Zone : **Type 1**

Were acetowhite patches visible on the cervix after application of 5% acetic acid? if yes, observe characteristics

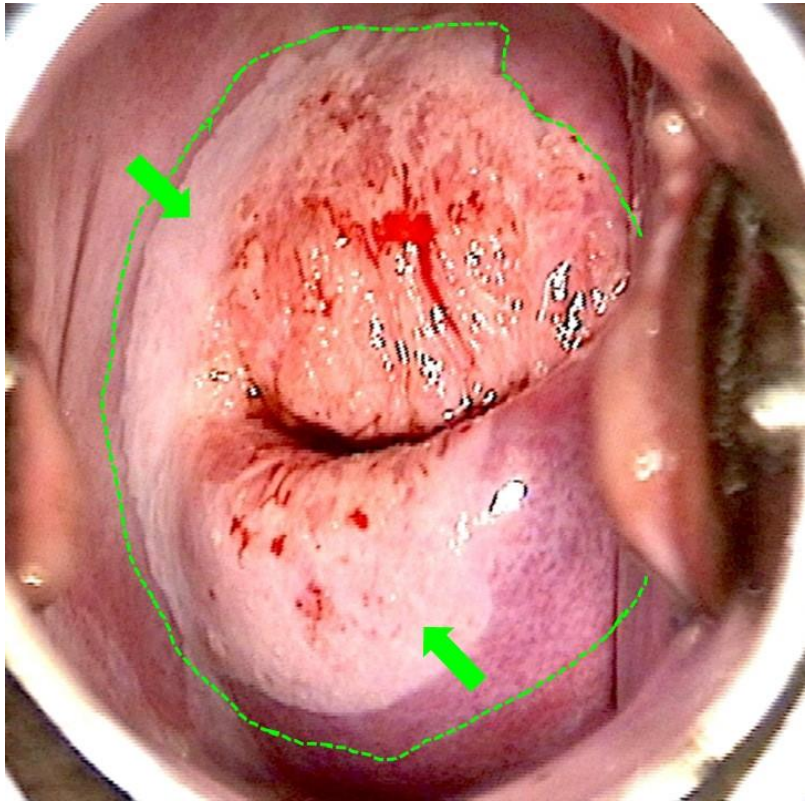
Characteristics of Acetowhite Lesions	VIA Interpretation
Speed of Appearance	Appeared immediately and stayed for more than a minute
Colour Intensity	Opaque/Dull/Cloudy White
Margins and Demarcations	Distinctly clear margin, not blending with rest of the cervix
Colour Uniformity	Distinct white patch on cervix, not blending with rest of the cervix
Location	Arising from SCJ, In transformation zone
VIA Result	**VIA Positive**
Management	***Lesion eligible for ablative treatment as-*** ✓ *SCJ fully visible on ectocervix* ✓ *Lesion occupy less than 75% of ectocervix* ✓ *No Suspicion of invasive cancer* ✓ *Lesion do not extend to vagina or endocervical canal (Thin AW areas near external os are due to squamous metaplasia)*

Identify Treatment Modality for the Lesion

Cervix BEFORE application of 5% acetic acid



Cervix AFTER application of 5% acetic acid



Cervix BEFORE application of 5% acetic acid

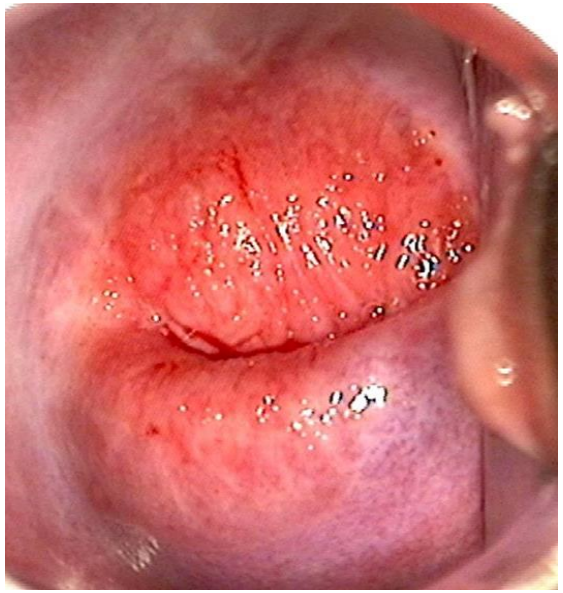


Fig: 12.1

The cervix appears normal.

Cervix AFTER application of 5% acetic acid

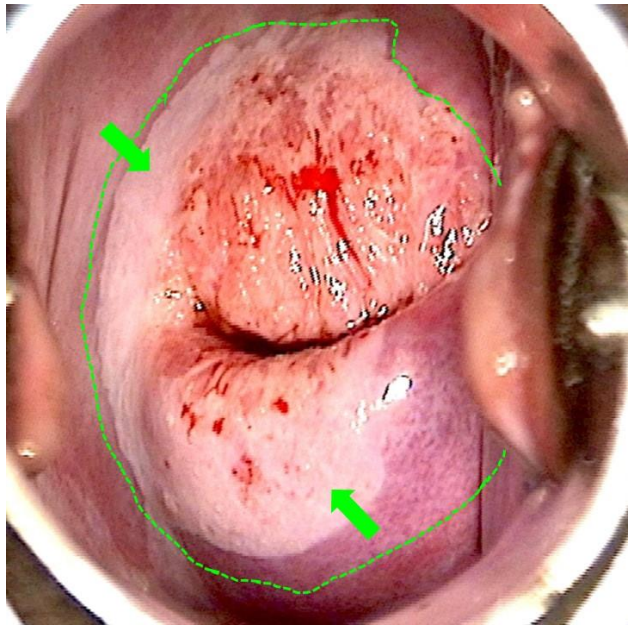


Fig: 12.2

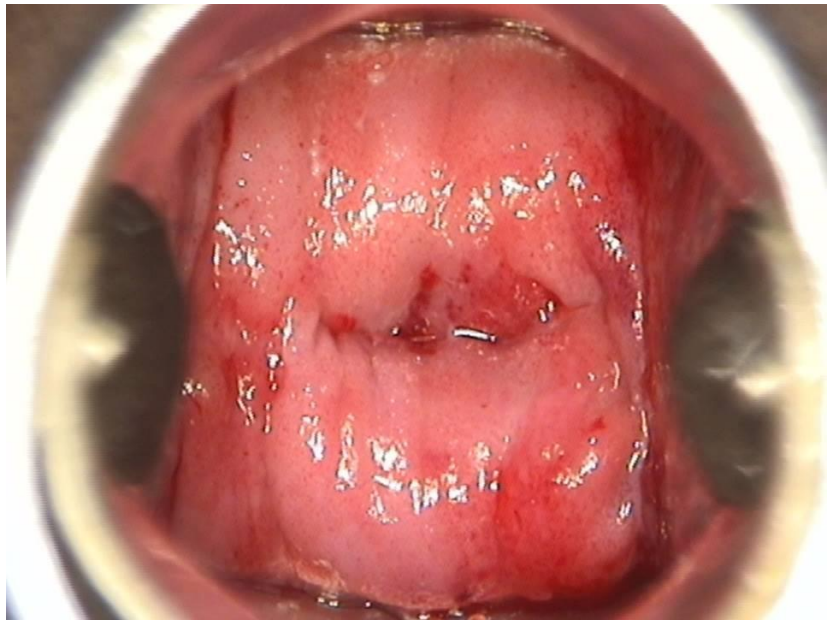
Green arrows: Dense acetowhite area
Green line: Outer limit of TZ
A large dense acetowhite area with well-defined margins is seen on both the anterior and posterior lips, occupying more than 75% of the ectocervix.

Were acetowhite patches visible on the cervix after application of 5% acetic acid? if yes, observe characteristics

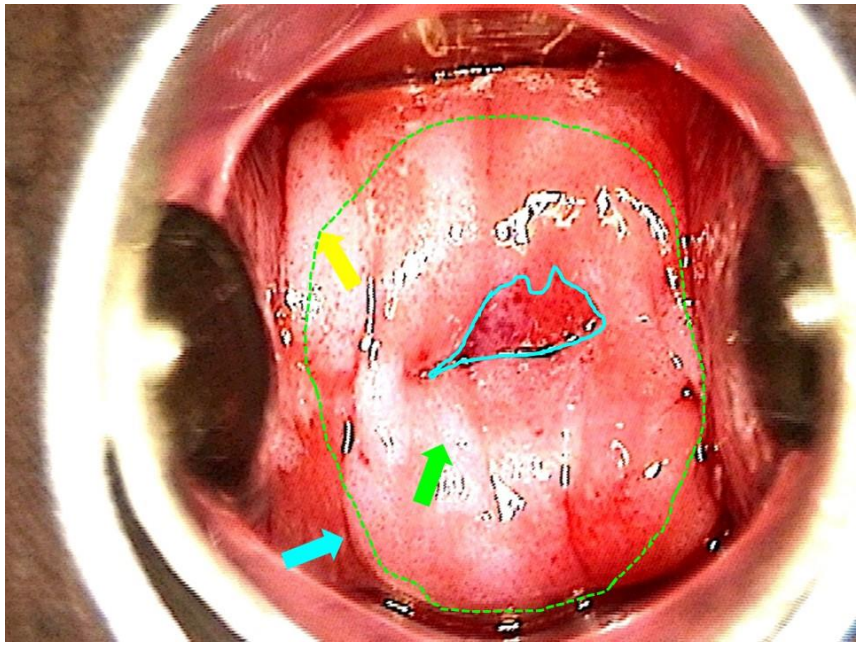
Characteristics of Acetowhite Lesions	VIA Interpretation
Speed of Appearance	Appeared immediately and stayed for more than a minute
Colour Intensity	Opaque, dull, cloudy white
Margins and Demarcations	Distinct, clear margins
Colour Uniformity	Distinct white patch on cervix, not blending with rest of the cervix
Location	Arising from SCJ, In transformation zone
VIA Result	**VIA Positive**
Management	***Lesion not eligible for ablative treatment as-*** ✓ *SCJ not visible* ✓ *Lesion occupy more than 75% of ectocervix*

Identify Treatment Modality for the Lesion

Cervix BEFORE application of 5% acetic acid



Cervix AFTER application of 5% acetic acid



Cervix BEFORE application of 5% acetic acid

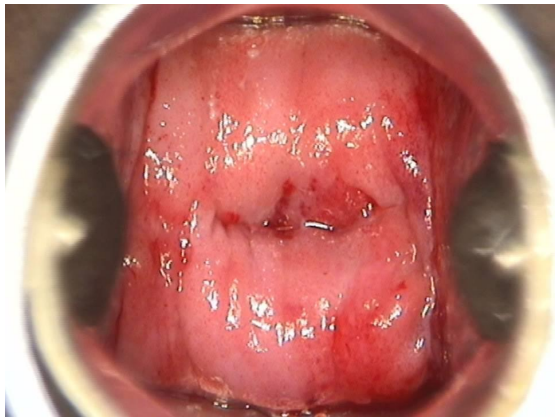


Fig: 12.1

No abnormal discharge is seen

Cervix AFTER application of 5% acetic acid

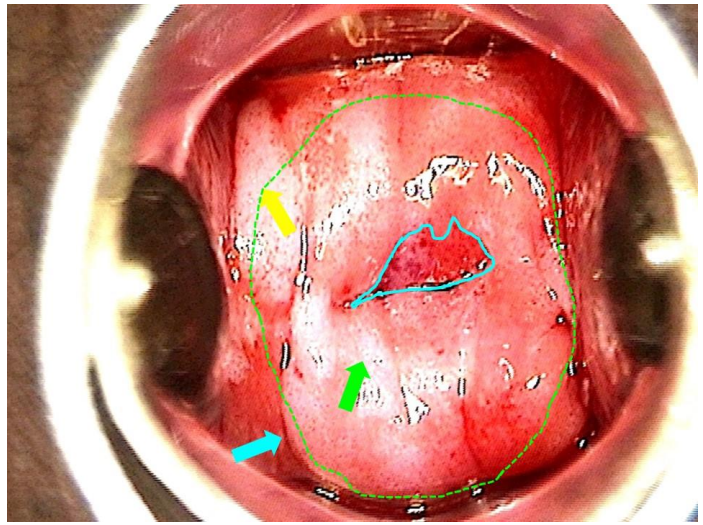


Fig: 12.2

Blue line: SCJ
Blue arrow: Raised margin
Yellow arrow: Extension to vagina
Green arrow: Dense Acetowhite area
Green line: Outer limit of TZ
A large dense acetowhite area with raised margins is visible. On the anterior lip the lesion is seen extending towards the vaginal wall

Were acetowhite patches visible on the cervix after application of 5% acetic acid? if yes, observe characteristics

Characteristics of Acetowhite Lesions	VIA Interpretation
Speed of Appearance	Appeared immediately and stayed for more than a minute
Colour Intensity	Opaque, dense, cloudy white
Margins and Demarcations	Distinct, regular and sharp margins
Colour Uniformity	Distinct white patch on cervix, not blending with rest of the cervix
Location	In transformation zone
VIA Result	**VIA Positive**
Management	***Lesion not eligible for ablative treatment as-*** ✓ *Lesion extending into the vagina (yellow arrow)*

Thank you!