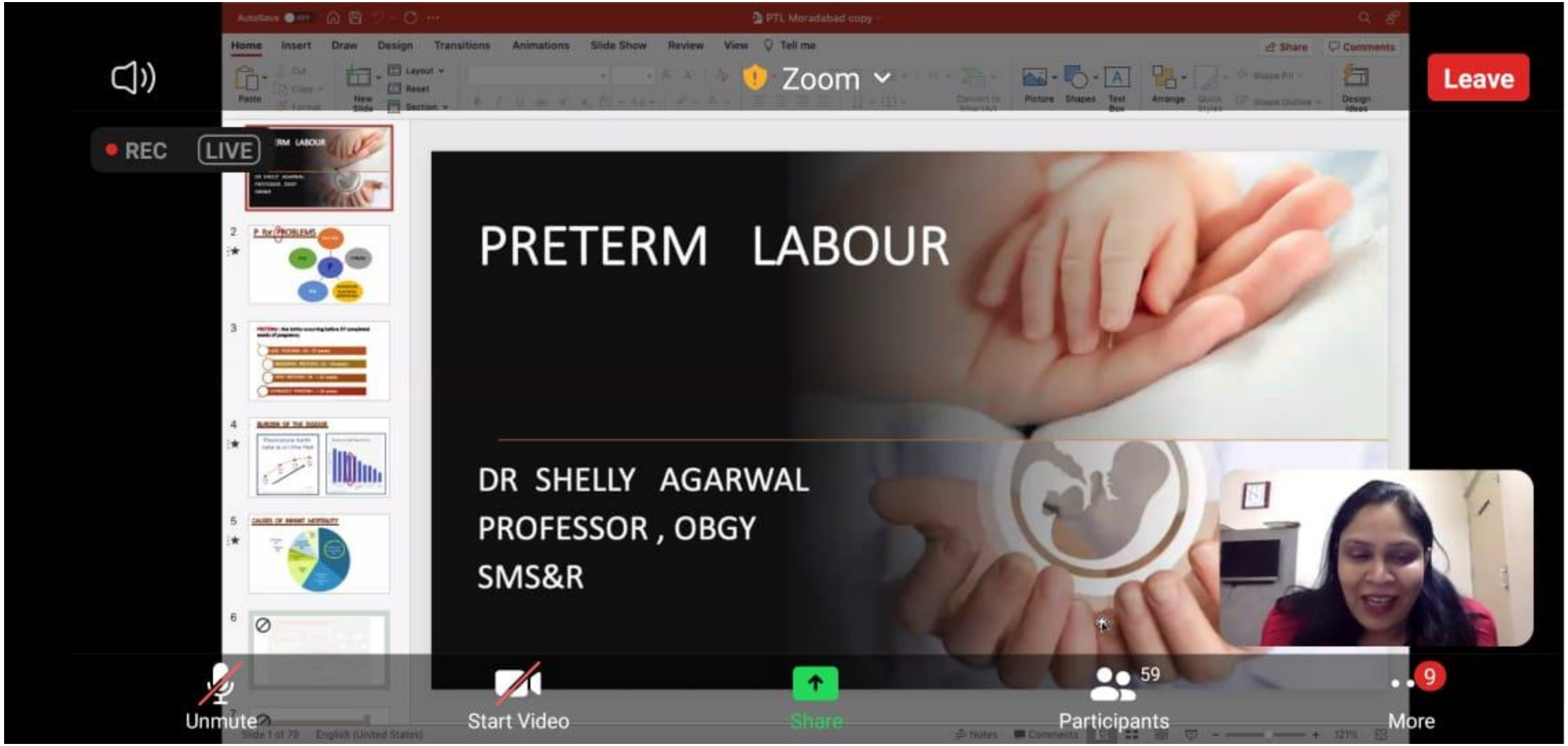
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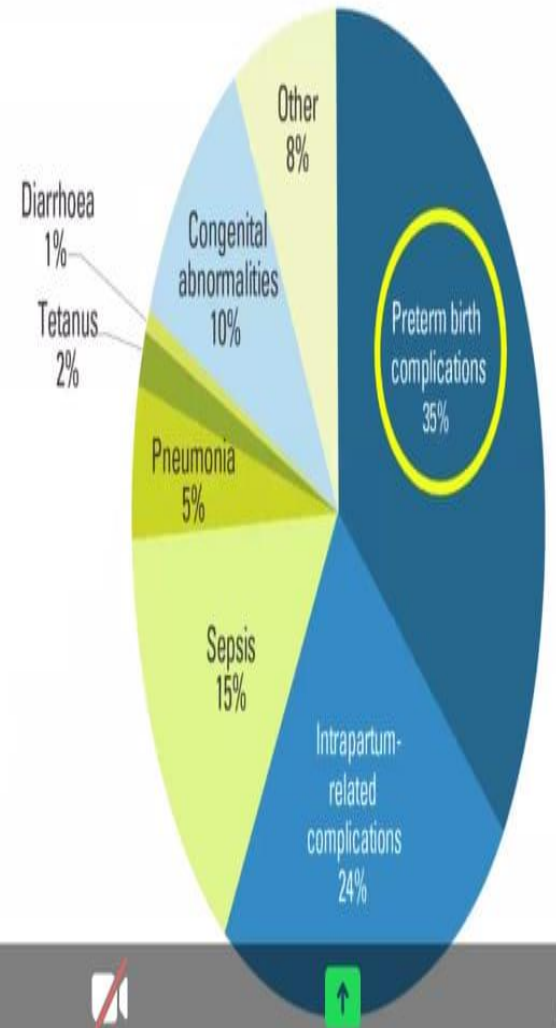
CAUSES OF INFANT MORTALITY



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MODIFIABLE RISK FACTORS

- Poor nutrition
- Medical disorders : Anaemia, HT, Diabetes, Asthma
- Infections : Malaria, Influenza, HIV, UTI, Asymptomatic bacteriuria
- Tobacco, smoking, drugs, alcohol
- Strenuous work, anxiety, stress, violence
- ART :selective fetal reduction
- Iatrogenic : FGR

NON – MODIFIABLE RISK FACTORS

- H/O spontaneous prior /mid Trimester loss or PTB
- Cervical injury / anomaly / surgery
- Uterine anomaly
- Age <18 yrs / >40 yrs
- Extremes of BMI
- Low socio-economic status
- Vaginal bleeding in pregnancy
- Multiple pregnancy
- Overdistended uterus

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TVS PROCEDURE :

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Empty the bladder (as full bladder may lengthen CL)

Probe placed in anterior fornix , without applying undue pressure.

Important tips :

3 measurements are made , of which shortest is taken as CL

CURVED CERVIX : Long cervix is usually curved , so should be **measured as trace** a straight line .

MUST WAIT ..... To look for dynamic changes.

Exert a little fundal pressure to see cervical shortening in high risk cases.

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Foetal fibronectin

- An extracellular glycoprotein located on the decidua & fetal membrane .
- From 22 – 35 weeks , it's presence in cervico-vaginal secretions is abnormal .
- Its presence indicates : separation of decidua & membranes.
- Role of FFN lies in it's negative predictive value (>95 %)
- Negative FFN rules out preterm labour risk & can reduce admissions & interventions.

Shelly Agarwal's screen

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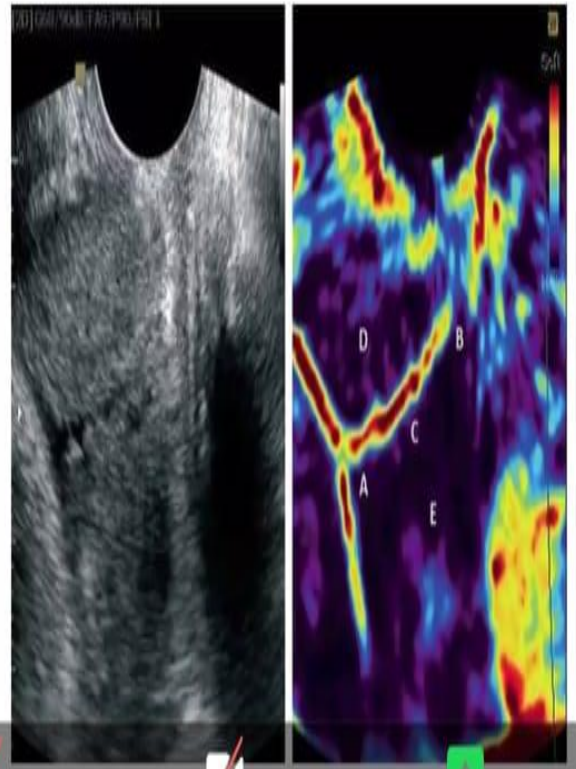
CERVICAL ASSESSMENT : ELASTOGRAPHY



- Newer modality which is now widely used to check the cervical stiffness.
- It is the continuous shortening & softening of the cervix , more so at internal os which gets reflected in the elasto findings resulting in enhanced tensile stre internal os .

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Asymptomatic bacteriuria

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- First trimester urine culture should be performed on all pregnant patients .
- A regular antenatal screening for women at high risk of asymptomatic bacteriuria .
- All patients with AB should be treated with antibiotics to redu risk of developing pyelonephrit & PTL

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Prophylactic vaginal progesterone & Prophylactic cervical cerclage

- Offer choice of either of both to women who have both :

- A history of spontaneous preterm birth (upto 34^{+0} weeks GA)

  OR

  A Mid-trimester loss (from 16^{+0} weeks of pregnancy onwards .

- Results from TVS done between 16^{+0} to 24^{+0} weeks of pregnancy CL ≤ 25 mm

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Prophylactic cervical cerclage

- Consider prophylactic cerclage for women when Results from TVS done between 16^{+0} to 24^{+0} weeks of pregnancy show CL ≤ 25 mm

AND WHO HAVE EITHER ..

- History of PPROM in a previous pregnancy OR

  A History of cervical trauma

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WHICH ONE ???

DEXA? OR BETA?	• Both equally efficaceous
DEXA ??	• 6 mg 12 hrly X 4 doses • Total : 24 mg
BETA ??	• 12 mg 24 hrly X 2 • Total : 24 mg

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CORTICOSTEROIDS

Consider corticosteroids 24^{+0} to 35^{+6} weeks POG

- RCOG,2015 ; NICE , 2019

Offer corticosteroids 24^{+0} to 33^{+6} weeks POG

May also be considered till 36^{+6} weeks POG imminent for PTB within 7days

- ACOG , 2016

Offer corticosteroids 24^{+0} to 33^{+6} weeks POG

- FOGSI , 2017

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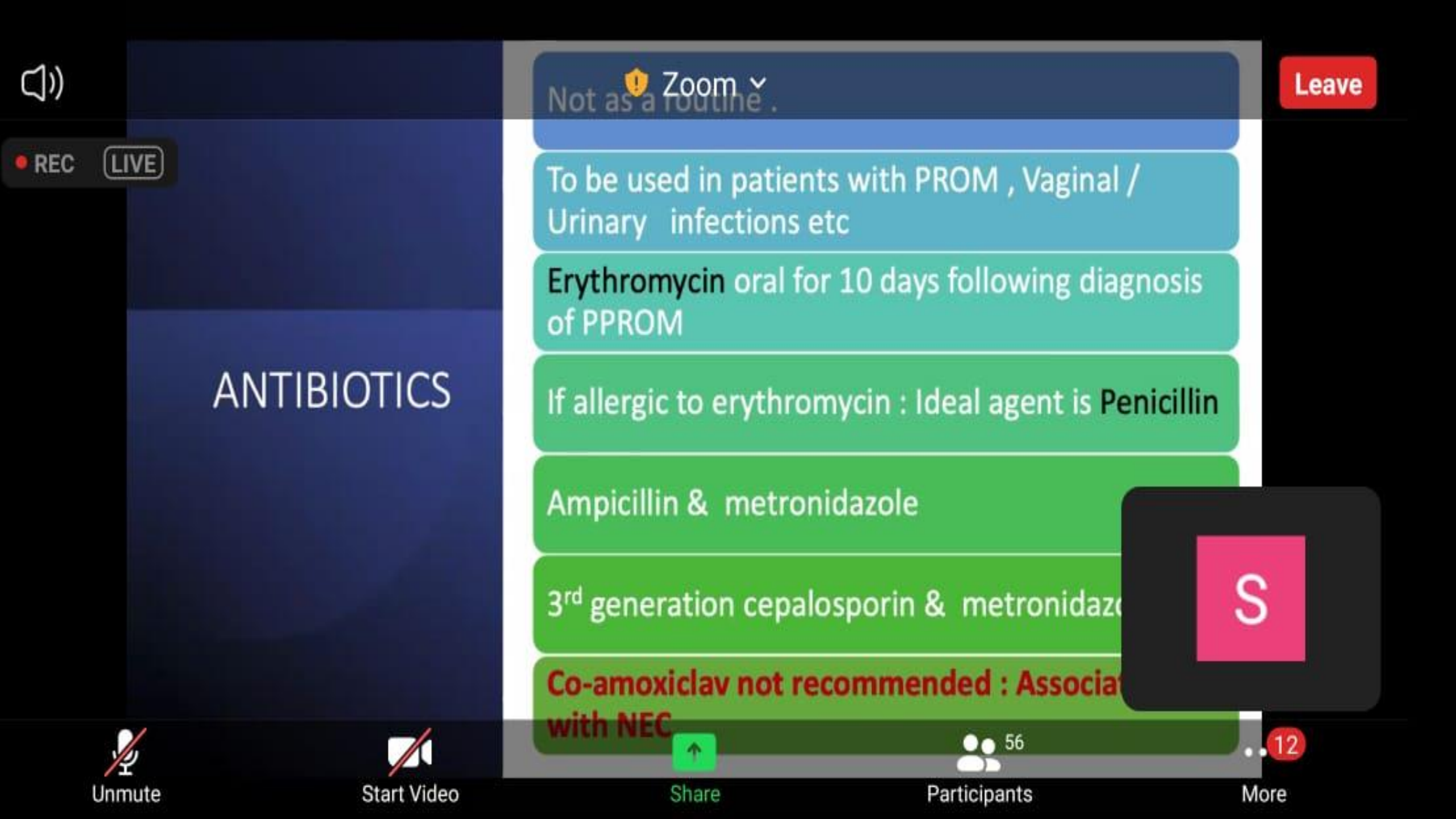
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Not as a routine .
To be used in patients with PROM , Vaginal / Urinary infections etc
Erythromycin oral for 10 days following diagnosis of PPROM
ANTIBIOTICS
If allergic to erythromycin : Ideal agent is Penicillin
Ampicillin & metronidazole
3rd generation cepalosporin & metronidaz
Co-amoxiclav not recommended : Associat
with NEC
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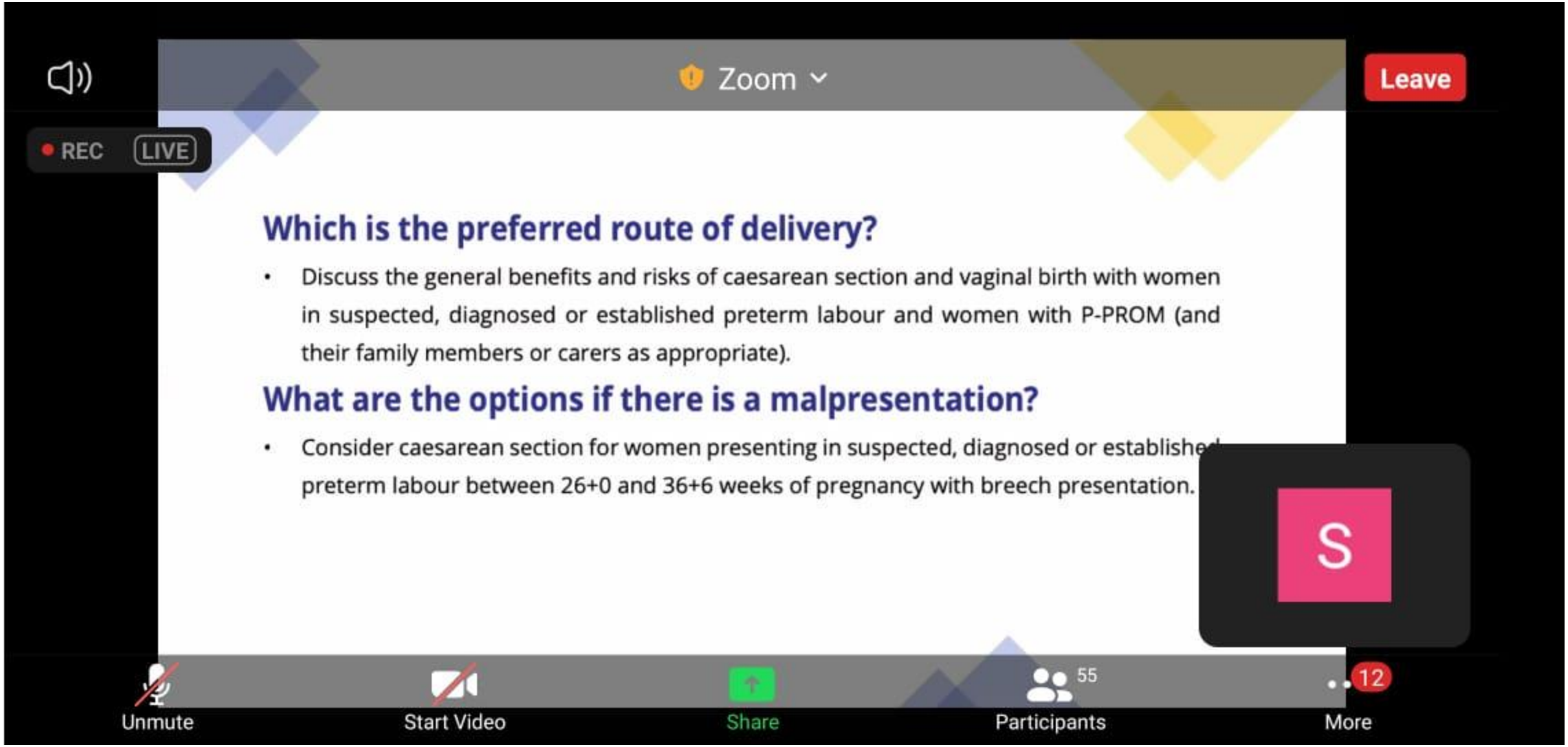
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Which is the preferred route of delivery?
• Discuss the general benefits and risks of caesarean section and vaginal birth with women in suspected, diagnosed or established preterm labour and women with P-PROM (and their family members or carers as appropriate).
What are the options if there is a malpresentation?
• Consider caesarean section for women presenting in suspected, diagnosed or established preterm labour between 26+0 and 36+6 weeks of pregnancy with breech presentation.
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Magnesium Sulphate For Neuroprotection

Offer intravenous magnesium sulphate
for neuroprotection in patients with

- **POG between 24^{+0} to 29^{+6} weeks [FOGSI , NICE]**

Consider it's use upto 33^{+6} weeks POG [NICE , ACOG]

IN PATIENTS WITH

- **Established Preterm labour**
- **Having a planned preterm birth within 24 hrs**
- **4 hrs prior to a planned C.S.**

S

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DO'S & DON'T FOR CORD CLAMPING
If significant maternal bleeding / baby needs resuscitation
• Consider milking the cord.
• Clamp cord immediately.
IF MOTHER STABLE / BABY STABLE
• Wait for atleast 30 sec ,but not more than 3 minutes.
• Baby placed at / below placent
S
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Our Proficient Speaker

Dr. Aparna Hegde, MD, DNB, MS (Stanford University),
IUGA International Fellowship (Cleveland Clinic Florida)

Assoc Prof (Hon), Urogynecology, Cama Hospital, Grant Medical College, Mumbai
Consultant Urogynecologist, Global Hospital, Mumbai; Surya Hospital, Mumbai and Womens Hospital, Mumbai
Founder and Director, C.U.P (Centre for Urogynecology and Pelvic Health), Delhi
Founder and Managing Trustee, ARMMAN, a NGO that works in the field of Maternal and Child Health in 19 states and has impacted the lives of over 26 million women and their children
Chair, FIUGA (Foundation of International Urogynecological Assistance)
Chair, IUGA Publications Committee
Member, Editorial Board, International Urogynecology Journal
Member, International Urogynecology Committee, Prolapse
Member, 7th International Consultation on Continence
Senior Visiting Fellow, IIM Ahmedabad

Principal Investigator, NIH Grant on Dysfunctional Voiding in Adolescent Girls
Awards: Ranked 15 in Fortune Magazine's 50 World's Greatest Leaders 2021 (one of only two Indians), MIT Elevate Award 2021; Skoll Award for Social Entrepreneurship 2020; TED Fellow 2020; WHO Public Health Champion Award, 2017; British Medical Journal South Asia Award for Maternal and Child Health Team of the Year 2018; USAID Social Entrepreneur of the Year Award 2018; WomanChangeMaker Award; 2018 (Womanity Foundation, Geneva); Fellowship of the Menopause Society of Sri Lanka, 2019, one of the five global women leaders featured in the Voice of America documentary, Single Step: Journeys of Women Leaders among other awards

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Goals of Evaluation:
Rule out transient causes of incontinence

- Delirium
- Infection
- Atrophic vaginitis
- Pharmacologic: antihypertensive agents, mainly alpha-adrenegic blockers.
- Psychological
- Endocrine: Diabetes mellitus, Diabetes Insipidus, hypercalcemia: osmotic diuresis leading to frequency, urgency, and nocturia
- Restricted mobility
- Stool impaction.

Goals of Evaluation:
Determine if incontinence is 'complicated'

- Recurrent incontinence
- Incontinence associated with
  - pain
  - hematuria
  - recurrent infection
  - significant voiding symptoms
  - pelvic irradiation
  - radical pelvic surgery
  - suspected fistula

Refer to a urogynecologist!!!

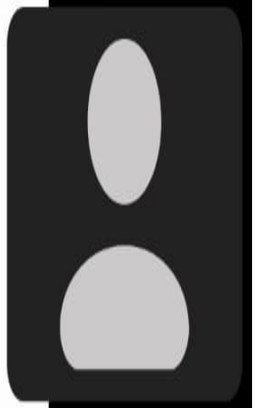
Goals of Evaluation

- Determine if there is
  - incontinence on physical activity
  - incontinence with frequency and urgency
  - incontinence with mixed symptoms

- Detect uncommon forms of incontinence that require referral to a specialist

- If there is other abnormality found,
  - significant post void residual
  - significant pelvic organ prolapse
  - pelvic mass

Refer to the urogynecologist!!



Evaluation: History and general assessment

- Thorough history and review of related systems
- Past medical history: co-existing diseases, medications etc
- Physical impairment: mobility, dexterity, visual acuity, lifestyle
- Social history: Environmental issues and lifestyle
- Treatment planning issues

- Characteristics of the urinary stream including
  - presence of pain and straining
  - Initiation of urination
  - Characteristics of emptying

- List symptoms:
  - storage issues: Urgency, frequency, nocturia, nocturnal enuresis, episodes of leakage
  - emptying issues: straining, hesitancy, dysuria, intermittent flow, thin stream, incomplete bladder emptying

Physical examination

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- Thorough physical examination and focused neurological examination

- Bimanual pelvic examination: POP quantification to rule out prolapse

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Physical Examination

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- Pelvic examination may help pick uncommon forms of incontinence

- large pool of urine in vagina: fistula
- large tender mass along the anterior vaginal wall: diverticulum
- large pelvic mass may press on bladder and cause urgency and frequency

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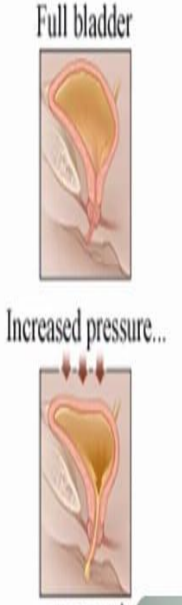
Third step at first visit: Physical Examination

Urinalysis

- Highly recommended by ICI guidelines
- UTI readily detected and easily treatable
- Dipstick or office urinalysis should suffice with culture done when indicated

Cough stress test and empty supine stress test

- **Cough stress test**
  - At a bladder volume of 300 ml or symptomatic fullness, highly reliable.



Limitations:

- If uninhibited detrusor contractions seen on cystometrogram, results suspect

- **Supine empty stress test**
  - positive test correlated with severe form of SUI

Recommended further assessment: postvoid residual

- ICI guidelines recommend it as a part of initial assessment in patients with symptoms of voiding dysfunction if the result is likely to influence management, for example in neurological patients.

- PVR < 50 ml normal; PVR > 200 ml abnormal, any value in between needs to be repeated and correlated clinically.

- If PVR > 200 ml, refer the patient to a specialist for voiding study to determine whether she has any other pathology.

Recommended further assessment

- **Validated questionnaires: ICIQ, UDI6, IIQ7, OAB-short form:** assessment of the
  - the patient's perspective of symptoms of incontinence
  - impact on quality of life
  - assessment of treatment outcome
- **3-day voiding diary: highly recommended**
  - the frequency of micturation and volumes voided
  - amount of fluid intake
  - incontinent episodes
  - amount of leakage
  - activity when incontinent episode
  - [illegible] of incontinent pa[illegible]

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  - incontinent episodes
  - amount of leakage
  - activity when incontinent episode
  - [illegible] of incontinent pa[illegible]

Bladder diary

AUA bladder diary

Time	Drinks		Trips to the bathroom		Accidental leaks	Did you feel a strong urge to go?	What were you doing at the time?
	What kind?	*How much?*	*How many times?*	*How much urine?*	*How much?*	*Yes / No*	*Sneezing, exercising, etc.*
6 - 7 a.m.							
7 - 8 a.m.							
8 - 9 a.m.							
9 - 10 a.m.							
10 - 11 a.m.							
11 a.m. - noon							
noon - 1 p.m.							
1 - 2 p.m.							
2 - 3 p.m.							

Fluid intake > 4 L/day: consider diabetes insipidus
Frequent small voids: consider interstitial cystitis
Peripheral edema with nocturia and/or nocturnal urgency incontinence: patient mobilizing fl[illegible]n the recumbent positio[illegible]

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Assessment Of Levator Tone

- Assess baseline tone and increased tone with contraction
  - Strength
  - Duration
  - Symmetry of contraction
- If no awareness of pelvic muscles, to be taught to locate and contract her pelvic muscles

➢ This serves as a baseline measure

➢ Helps in identifying women who will benefit from focused interventions to strengthen the pelvic floor

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Assessment Of Levator Tone

Pelvic Floor Assessment Grading (Modified Oxford Scale)	
0/5	No discernible muscle contraction
1/5	Weak contraction, **flicker** or pulsing under examining finger
2/5	Weak contraction, increase in tension in muscle **without lift or squeeze**
3/5	Moderate contraction, **lifting** of posterior vaginal wall & **squeezing** base of finger with in drawing of perineum
4/5	Good contraction , **elevation** of posterior vaginal wall & **approximation** of the index & middle fingers against resistance
5/5	Strong contraction, **elevation** of the posterior vaginal wall and approximation of the index and middle fingers **against strong resistance**

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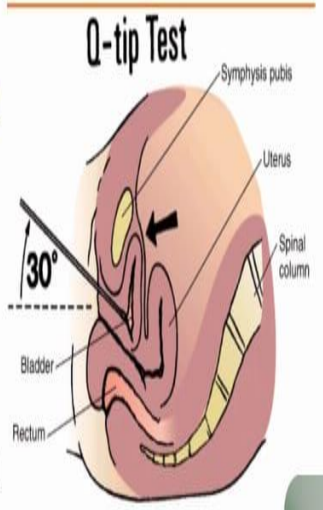
Other tests: Q-tip testing

- To assess the mobility of the urethrovesical junction
- Hypermobility is defined as excursion with straining of more than 30 degrees from the resting angle or more than 30 degrees from the horizontal.
- Provides no information about type of incontinence
- Its main role is to determine which subjects would benefit from a surgical elevation of the bladder neck.
- Not a part of the ICI guidelines.



Pune 2014

- Per rectal examination:
  - Pelvic pathology
  - Resting tone of anal sphincter
  - Rectal mass
  - Fecal impaction
- Screening neurological examination:
  - Pelvic floor muscle strength
  - Anal sphincter resting tone (85% due to internal anal sphincter)
  - Voluntary anal contraction and
  - Perineal sensation

Recommended further assessment

- **Uroflowmetry with measurement of PVR:** recommended as a screening test for symptoms suggestive of voiding dysfunction or physical signs of POP or bladder distension

- **Renal function assessment:** recommended in patients with probable renal impairment

- **Pad testing:** 24 hour test recommended, if done

Behavioral Modification

- Wt. loss/ stop smoking/ treat chronic cough and UTI

"Kegel" exercises

- strengthen pelvic floor muscles via exercise

Fluid Intake

5- 8 glasses of liquids a day

Medications: Duloxetine and local estrogen cream

Introducing the MAPLe Biofeedback and Electrical Stimulation System

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MAPLe Biofeedback System

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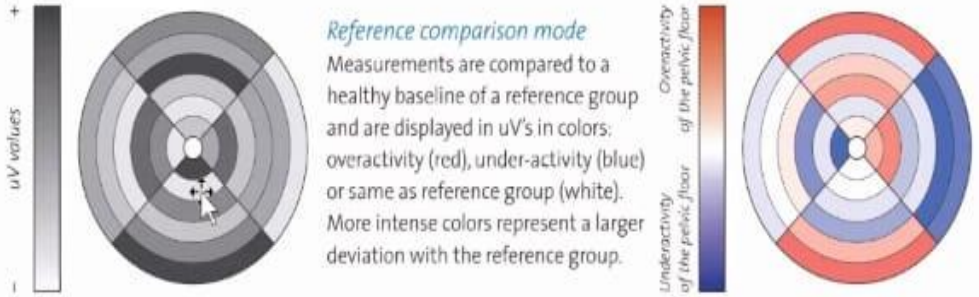


Reference comparison mode

Measurements are compared to a healthy baseline of a reference group and are displayed in uV's in colors: overactivity (red), under-activity (blue) or same as reference group (white). More intense colors represent a larger deviation with the reference group.

Surgical Treatment

- Indications
  - Failure of conservative therapy
  - Severe incontinence
  - Inability or unwillingness to comply with non-surgical therapy

Surgical Treatment: Retropubic Colposuspension (Burch)

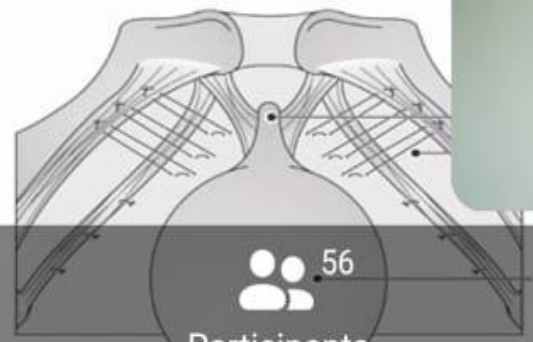
Center for Urogynocology & Pelvic health

- **Indication: SUI with hypermobility with MUCP > 20 cm/H_2O: Burch should not be done in a patient of Intrinsic Sphincter Deficiency**

65-90% reported 1-year cure rate and 70% reported 10-year cure rate

- 5-27% rate of de novo urge incontinence
- 2-13% risk of enterocele formation

Updated systematic review and meta-analysis has shown Burch to be inferior to RP slings (both subjective and objective cure rates)

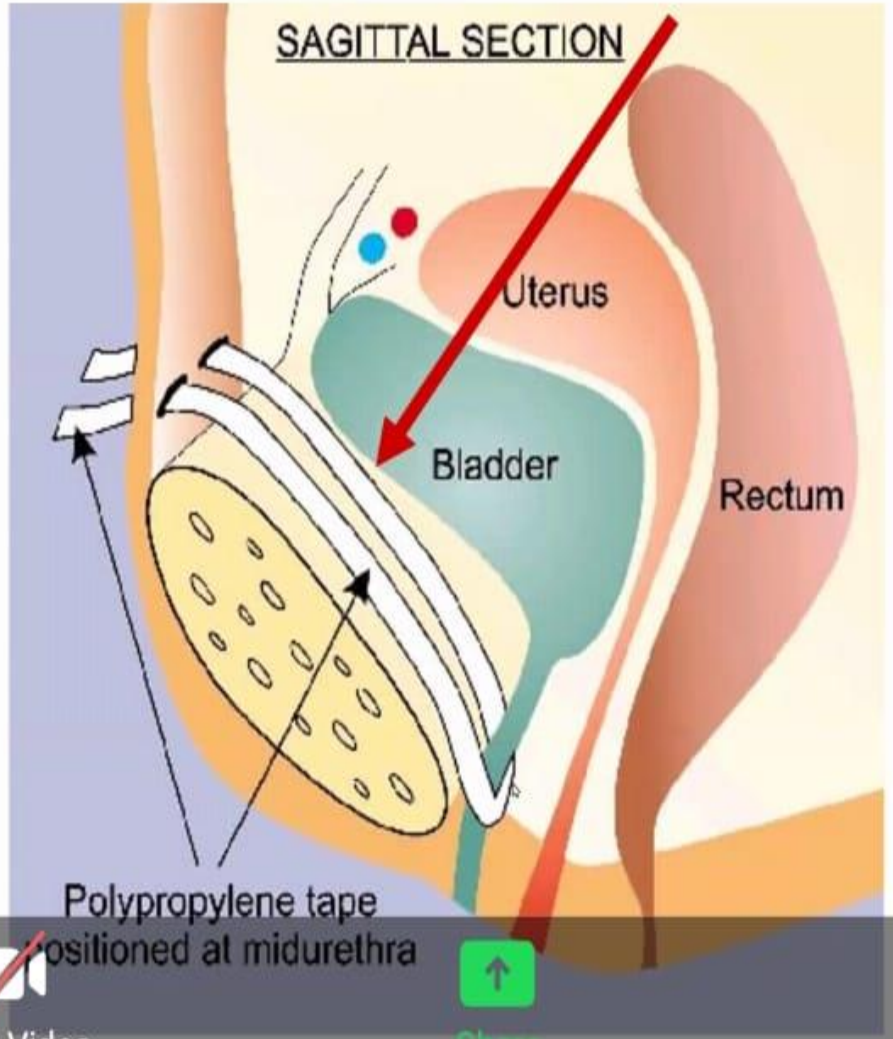


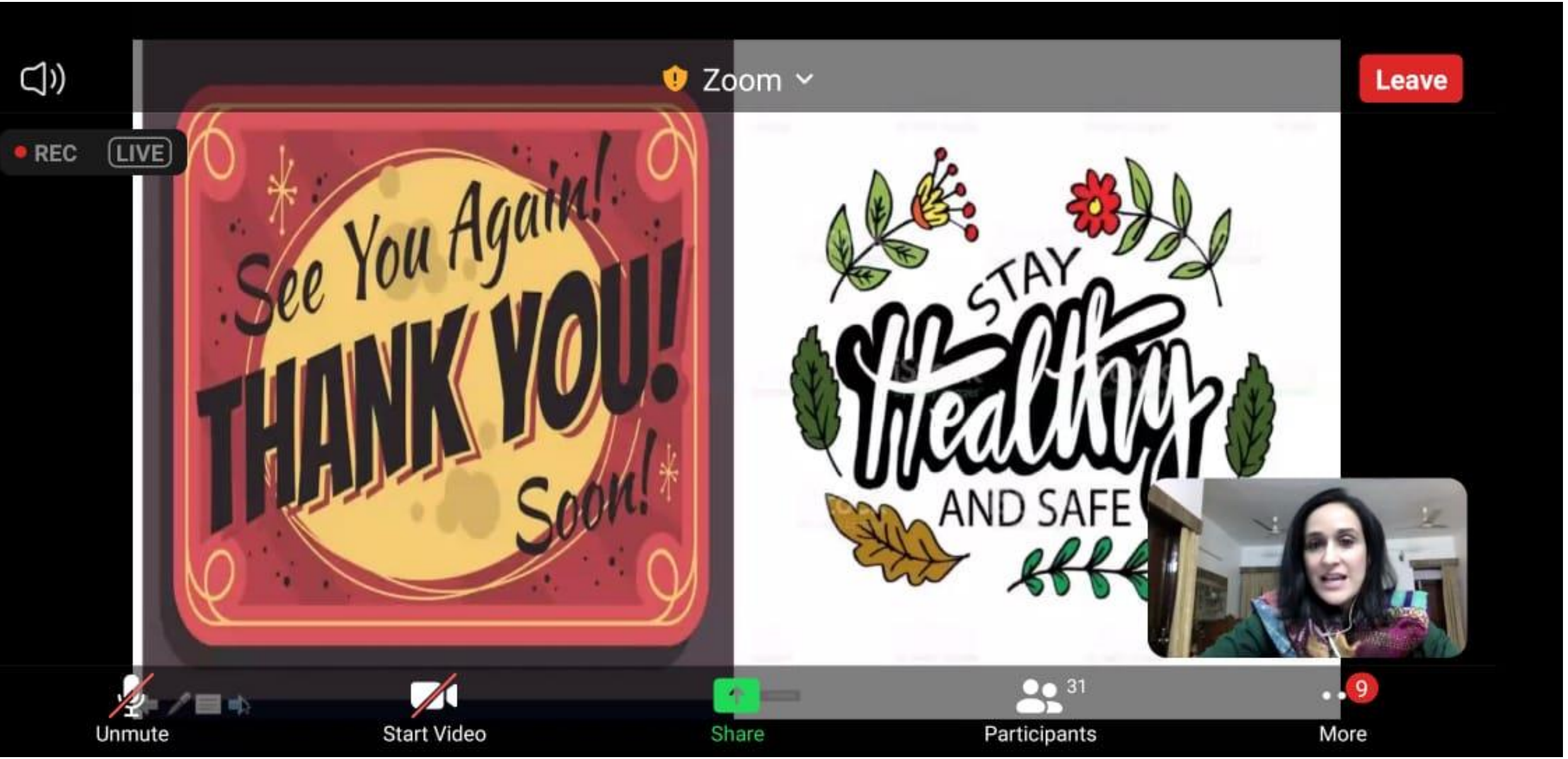
- Nova[illegible]t. al. European Urology; [illegible]7

CREATION OF ARTIFICIAL NEOLIGAMENTS

Basis for minimally-invasive SUI surgery:

Retropubic and then TOT slings

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