

Proteinuria: Transient: (without underlying kidney disease)  
protein

↓  
- Cause

- Fever, exercise, cold, stress, dehydration

Dx: ① urine dipstick:

② microscopic exam

③ repeat dipstick protein test on 2<sup>nd</sup> morning voided urine sample

if absent



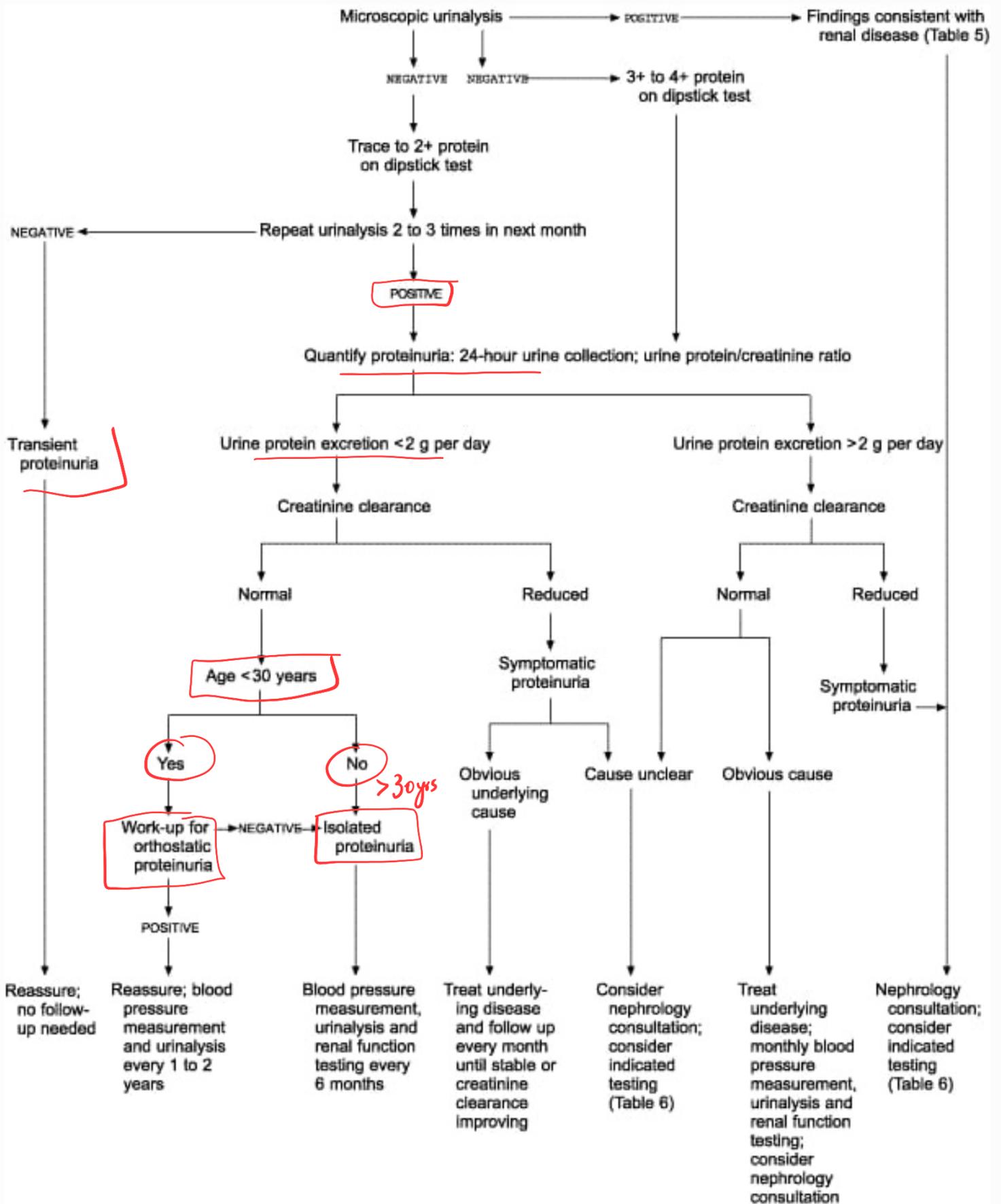
Transient or  
orthostatic  
proteinuria

if present



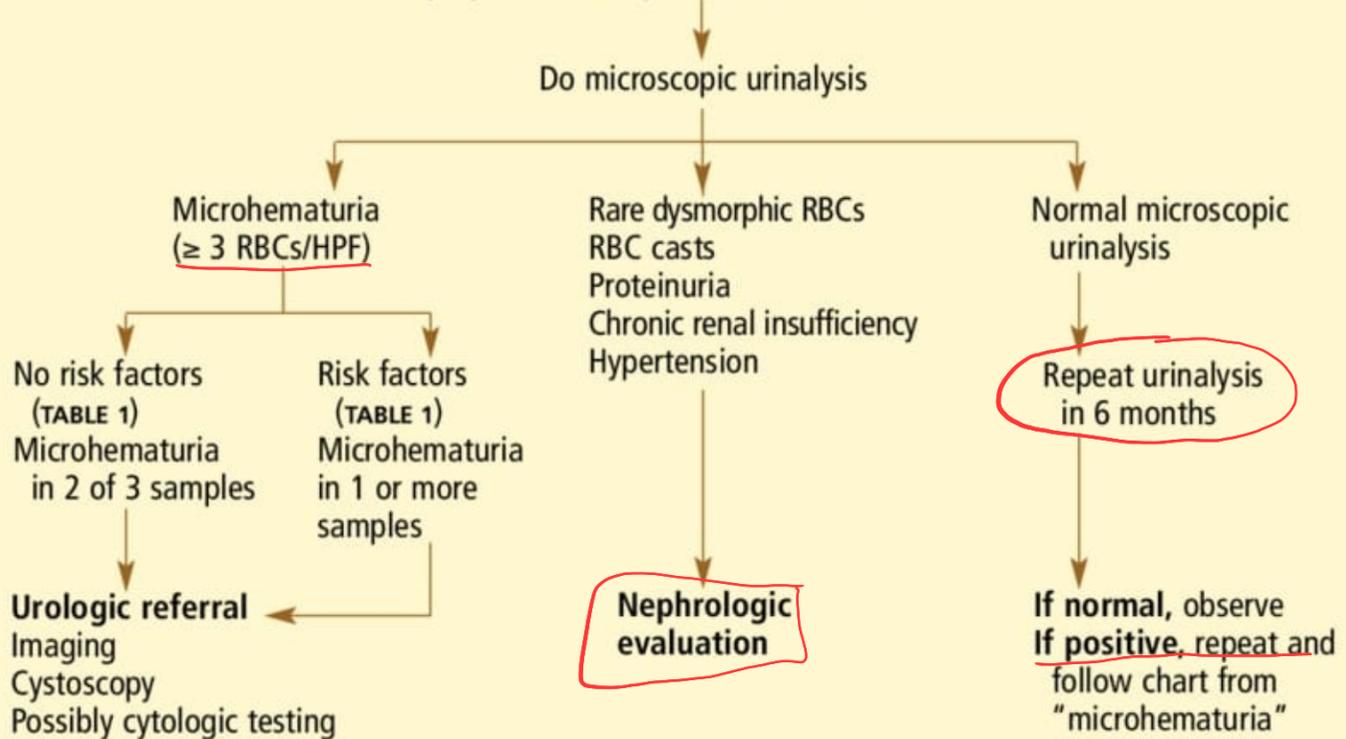
evaluate further.

① Tx → resolves spontaneously  
→ No Tx. Reassure.

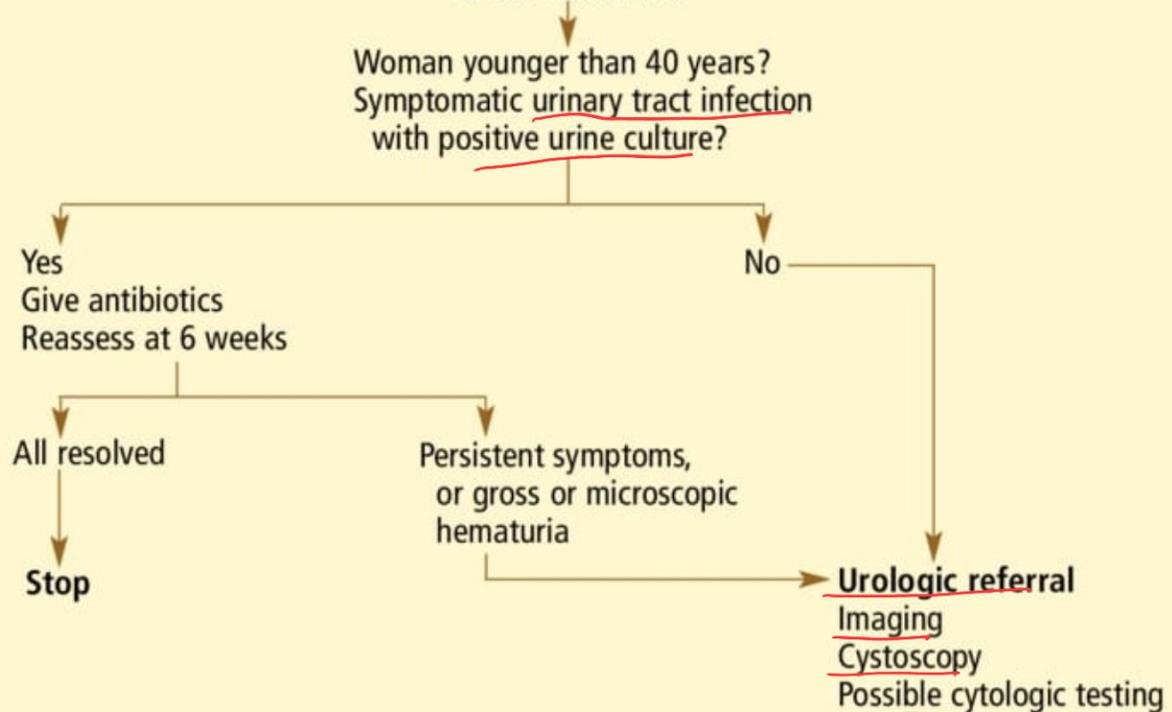


# Diagnostic trees for asymptomatic dipstick hematuria and gross hematuria

## Asymptomatic, dipstick hematuria



## Gross hematuria



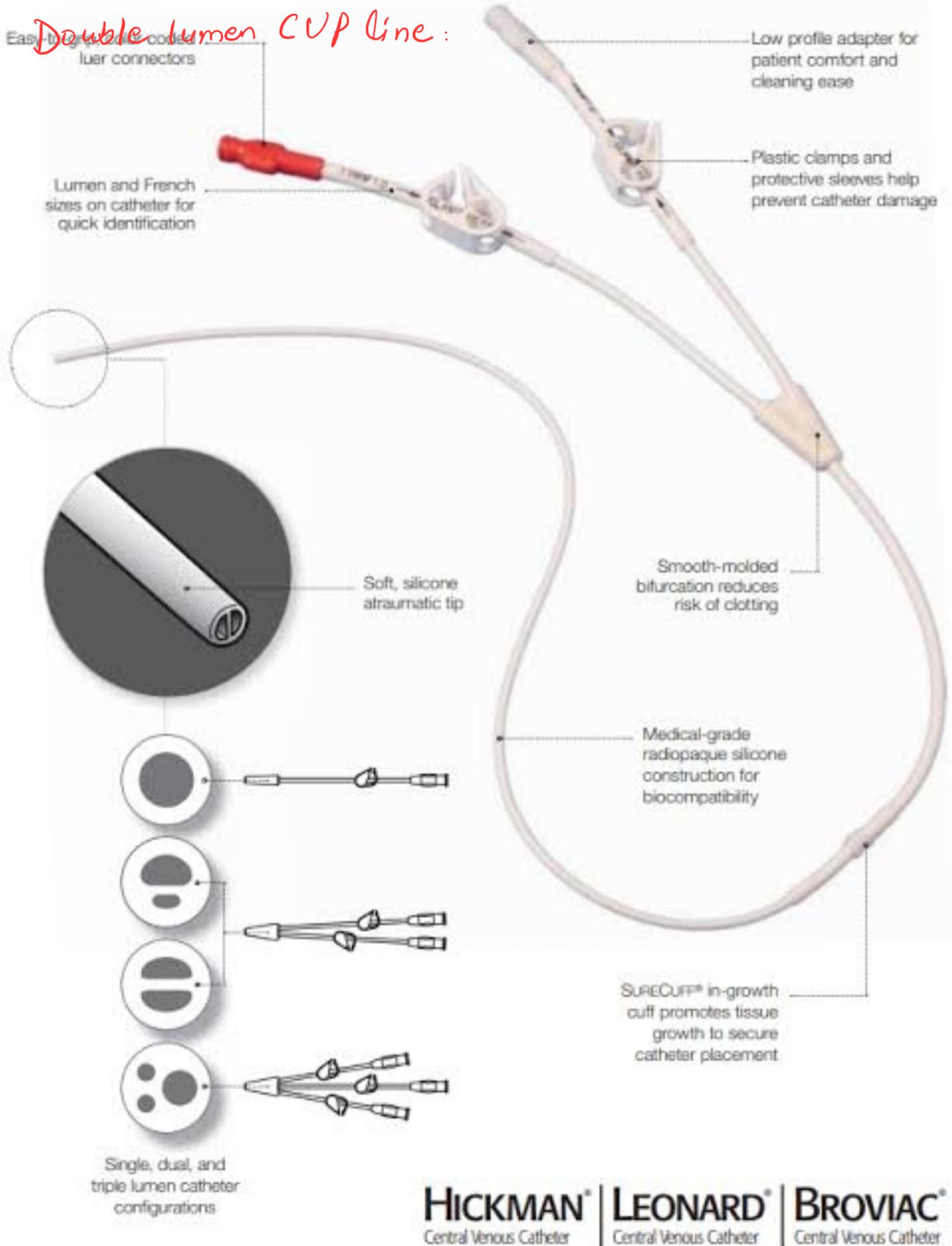
## Uses of CVP line:

- ① for administration of medications
- ② CVP pressure monitoring
- ③ Blood sampling
- ④ Total parenteral Nutrition
- ⑤ Chemotherapy

Routes - subclavian, femoral, Internal Jugular vein.

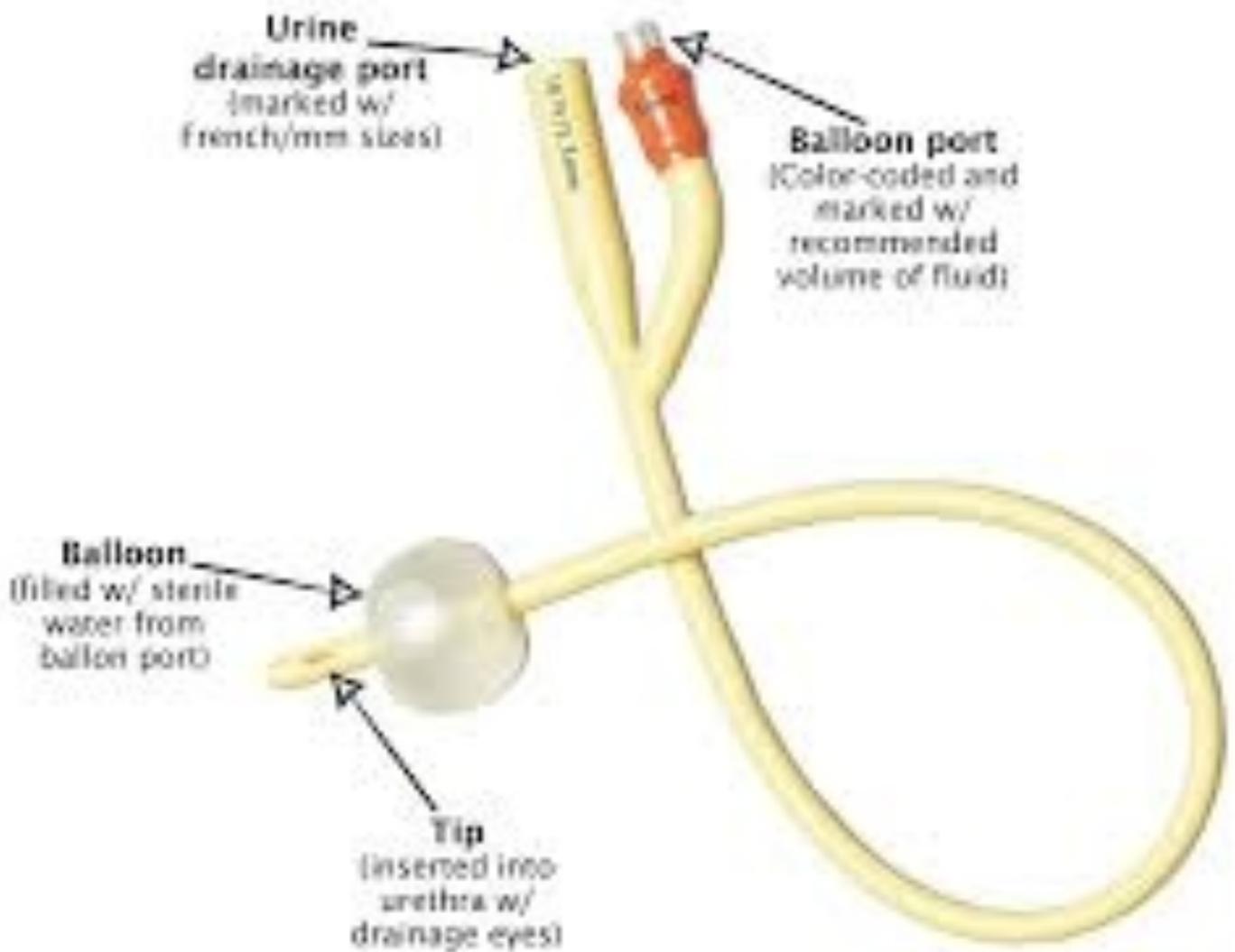
Complications • Infections • Bleeding • Thrombosis  
mechanical issues

# Double lumen CVP line:



# Foley's catheter:-

- uses
- Urinary retention/incontinence
  - for urine analysis (specimen collection)
  - in critically ill pts
  - During Sx
  - medicine delivery
  - for image studies.



- Complications UTI, urethral damage,
- Bleeding, Bladder spasms, stones.

• How you would know if entered Bladder: →

• Free flow of urine  
draining into collection bag. ←

• what if obstructed catheter?

To manage an obstructed Foley catheter, first check for kinks in the tubing, then try gently flushing the catheter with sterile saline using a syringe, and if that doesn't work, consider changing the catheter as a blocked catheter may indicate a need for replacement; always consult a healthcare professional if you suspect a catheter obstruction, especially if accompanied by discomfort or lack of urine output.

## Station 3:

• GDM

• 2 fetal risks:

• macrosomia

• preterm Birth

• Hypoglycemia

• Cardiac arrest

• 2 maternal: PROM, Preclampsia

Certainly, let's analyze the case and answer the questions together.

Case Summary:

A 32-year-old woman (G3P2) at 30 weeks of pregnancy presents with polyhydramnios. Her OGTT results show fasting blood sugar of 126 mg/dl and 1-hour postprandial sugar of 200 mg/dl. Her booking RBS was 130 mg/dl.

Questions:

- \* What is the most likely diagnosis?
- \* Name 2 fetal risks.
- \* Name 2 maternal risks.
- \* What will be your next step?
- \* How will you treat her?

Analysis and Answers:

1. What is the most likely diagnosis?

Given the combination of polyhydramnios and elevated blood sugar levels, the most likely diagnosis is Gestational Diabetes Mellitus (GDM).

2. Name 2 fetal risks.

\* Macrosomia: GDM can lead to excessive fetal growth, resulting in a large-for-gestational-age (LGA) baby. This can increase the risk of birth trauma for the baby and the mother.

\* Hypoglycemia: After birth, babies of mothers with GDM may experience low blood sugar due to the sudden cessation of glucose supply from the placenta.

3. Name 2 maternal risks.

\* Preeclampsia: GDM increases the risk of developing preeclampsia, a condition characterized by high blood

pressure and protein in the urine.

\* Cesarean delivery: The risk of needing a cesarean section is higher in women with GDM, especially if the baby is large or if labor is not progressing normally.

#### 4. What will be your next step?

The next step would be to confirm the diagnosis of GDM and discuss treatment options with the patient. This may involve:

\* Repeat OGTT: To confirm the diagnosis of GDM, a repeat OGTT may be recommended.

\* Dietary counseling: A registered dietitian can provide guidance on managing blood sugar levels through diet and exercise.

\* Monitoring: Regular monitoring of blood sugar levels, fetal growth, and other factors will be necessary.

#### 5. How will you treat her?

Treatment for GDM typically involves a combination of:

\* Dietary management: This is the cornerstone of treatment and involves following a meal plan that is low in carbohydrates and high in fiber.

\* Exercise: Regular physical activity can help improve insulin sensitivity and manage blood sugar levels.

\* Medications: In some cases, medication such as insulin or oral glucose-lowering drugs may be necessary to control blood sugar levels.

Additional Considerations:

\* Fetal surveillance: Close monitoring of the fetus, including ultrasound examinations and non-stress tests, will be important to assess fetal well-being.

\* Mode of delivery: The decision regarding the mode of delivery (vaginal vs. cesarean) will depend on various factors,

including the size of the baby, the progress of labor, and the presence of any complications.

Station: 4 :

Fe Def Anemia:

### 1. Most Likely Diagnosis:

The most likely diagnosis is iron deficiency anemia. The patient presents with decreased hemoglobin (Hb), mean corpuscular volume (MCV), mean corpuscular hemoglobin (MCH), and mean corpuscular hemoglobin concentration (MCHC), which are typical findings in microcytic hypochromic anemia caused by iron deficiency. This is common in pregnancy due to increased iron demand.

### 2. Next Investigation:

Serum Ferritin: To confirm iron deficiency anemia.

Peripheral Blood Smear: To examine red cell morphology.

Other tests like total iron-binding capacity (TIBC) may also be helpful.

### 3. Maternal Risks:

Increased risk of preterm labor.

Increased risk of postpartum hemorrhage.

### 4. Fetal Risks:

Intrauterine growth restriction (IUGR).

Low birth weight or preterm birth.

### 5. Treatment:

Oral iron supplementation (ferrous sulfate or ferrous fumarate with folic acid).

Dietary advice to increase iron-rich foods (e.g., green leafy vegetables, red meat).

If oral iron is not tolerated or ineffective, parenteral iron therapy may be considered.

Treat any underlying causes if identified.

# Station 5:

## 1. Three Indications:

Prolonged second stage of labor (failure to progress).

Fetal distress in the second stage of labor requiring expedited delivery.

Maternal exhaustion or contraindications to pushing (e.g., certain cardiac conditions).

## 2. Two Maternal Complications:

Vaginal or perineal trauma (tears or lacerations).

Postpartum hemorrhage due to uterine or vaginal trauma.

## 3. Two Fetal Complications:

Scalp abrasions or lacerations.

Cephalohematoma or subgaleal hemorrhage (due to traction).

# Station 13:

## 1. Indications:

Prolonged second stage of labor (maternal exhaustion or failure to progress).

Fetal distress in the second stage of labor (abnormal fetal heart rate).

Maternal conditions that contraindicate pushing (e.g., severe cardiac disease or aneurysm).

## 2. Contraindications:

Incomplete cervical dilation.

Fetal head not engaged or malpresentation (e.g., breech).

Inadequate maternal pelvis or suspicion of cephalopelvic disproportion.

## 3. How It Is Used in Vaginal Delivery:

Positioning the patient: The mother is placed in a lithotomy

position.

Inserting forceps: After confirming full cervical dilation and the correct fetal head position, the blades of the forceps are carefully inserted one at a time along the sides of the fetal head.

Application of traction: Gentle traction is applied with maternal contractions to assist the descent of the fetal head.

Delivery of the baby: Traction is adjusted to follow the natural curve of the birth canal until the baby's head is delivery.

## Breech delivery .

Certainly, let's discuss breach delivery.

### Types of Breach Delivery

\* Frank breech: The hips are flexed and the knees extended, so the buttocks present first, with the legs extended upward along the body.

\* Complete breech: The hips and knees are both flexed, so the buttocks and feet present together.

\* Footling breech: One or both feet present first.

### Maternal Causes of Breach Presentation

\* Uterine abnormalities: Uterine malformations like bicornuate uterus or fibroids can hinder fetal movement and increase the risk of breech presentation.

\* Placenta previa: When the placenta covers part or all of the

cervix, it can restrict fetal movement and lead to breech presentation.

\* Polyhydramnios: Excess amniotic fluid can reduce space for the fetus to maneuver and increase the risk of breech presentation.

### Fetal Causes of Breech Presentation

\* Prematurity: In premature infants, the musculoskeletal system may not be fully developed, making it difficult for them to assume a head-down position.

\* Multiple pregnancy: In twins or triplets, the space constraints can lead to abnormal fetal positioning.

\* Congenital anomalies: Certain fetal abnormalities, such as hydrocephalus or anencephaly, can interfere with normal fetal positioning.

### Complications of Breech Delivery

\* Prolapsed cord: The umbilical cord can slip down ahead of the presenting part (buttocks or feet), which can compress the cord and reduce blood flow to the fetus.

\* Difficult delivery: Breech deliveries are often more challenging and may require assistance with forceps or vacuum extraction, or even cesarean section.

\* Fetal injury: The risk of injuries to the fetus, such as fractures or nerve damage, is higher during breech delivery.

\* Postpartum hemorrhage: The risk of excessive bleeding after delivery is increased in breech deliveries.

### Modes of Delivery for Breech Presentation

\* External cephalic version (ECV): This procedure involves manually turning the fetus from a breech position to a head-down position. It is usually attempted before labor begins.

\* Vaginal delivery: In some cases, vaginal delivery may be

possible for breech presentations, especially in experienced hands. However, it carries higher risks than cephalic deliveries.

\* Cesarean section: This is often the preferred method of delivery for breech presentations, especially in cases where vaginal delivery is deemed unsafe or unlikely to be successful.

Important Note:

The decision on how to deliver a breech baby should be made on an individual basis, taking into account the specific circumstances of the pregnancy and the expertise of the healthcare providers.

Let me know if you would like to delve deeper into any specific aspect of breech delivery!

Day 2 Ospe:

Station 1:-

Certainly, let's analyze the urine results and discuss the next steps.

1. Findings in Urine RE:

\* Glucose +++: This indicates a high level of glucose in the urine, suggesting gestational diabetes.

\* Protein nil: No protein is detected in the urine.

\* RBC nil: No red blood cells are found in the urine.

\* Pus cells 1-2: A small number of pus cells (white blood

cells) are present. This could be due to a minor urinary tract infection or a normal finding.

\* Ketones nil: Ketones are not present in the urine. Ketones are produced when the body breaks down fat for energy, which can occur in uncontrolled diabetes.

## 2. Further Investigations:

\* Oral Glucose Tolerance Test (OGTT): This is the standard test to diagnose gestational diabetes. It involves measuring blood glucose levels after fasting and at intervals after consuming a sugary drink.

\* Urine culture and sensitivity: This test can rule out a urinary tract infection if the number of pus cells is concerning.

\* Blood tests: Checking blood sugar levels, kidney function tests, and liver function tests may be necessary.

## 3. Treatment (if gestational diabetes is confirmed):

\* Diet and exercise: The first-line treatment is usually dietary changes and regular exercise to manage blood sugar levels. A registered dietitian can provide personalized dietary advice.

\* Blood sugar monitoring: Regular blood sugar monitoring is essential to track how well the treatment plan is working.

\* Medications: In some cases, medication (such as insulin or oral hypoglycemic agents) may be necessary to control blood sugar levels.

## 4. Complications in Late Pregnancy (if gestational diabetes is not well-controlled):

\* Macrosomia: The baby may grow excessively large (macrosomia), which can lead to complications during delivery.

\* Preeclampsia: Gestational diabetes increases the risk of developing preeclampsia, a condition characterized by high

blood pressure and protein in the urine.

\* Preterm birth: Gestational diabetes can increase the risk of preterm labor and delivery.

\* Shoulder dystocia: This is a complication during delivery where the baby's shoulders get stuck behind the mother's pubic bone.

\* Respiratory distress syndrome in the baby: High blood sugar levels in the mother can lead to the baby's lungs not developing fully, increasing the risk of respiratory problems after birth.

Important Note:

\* This information is for general knowledge and educational purposes only and does not constitute medical advice.

\* If you have concerns about your pregnancy or suspect you may have gestational diabetes, please consult your doctor or midwife for proper diagnosis and management.

Let me know if you have any further questions!

## Testicular Torsion - Station 2:

Testicular torsion is a serious medical condition that occurs when a testicle rotates, twisting the spermatic cord that brings blood to the scrotum. This twisting cuts off the blood supply to the testicle, causing severe pain and swelling.

Causes:

\* Bell Clapper Deformity: This is the most common cause, where the testicle is not properly attached to the scrotum, allowing it to rotate freely.

\* Trauma: In some cases, a direct injury to the scrotum can

cause testicular torsion.

\* **Strenuous Exercise:** Although rare, sudden forceful movements can sometimes trigger torsion.

Symptoms:

- \* Sudden, severe pain in the scrotum
- \* Swelling of the scrotum
- \* Nausea and vomiting
- \* Abdominal pain
- \* One testicle higher than the other
- \* Redness or discoloration of the scrotum

Diagnosis:

\* **Physical examination:** A doctor will examine the scrotum and check for tenderness, swelling, and abnormal positioning of the testicle.

\* **Ultrasound:** An ultrasound scan can help confirm the diagnosis by showing reduced or absent blood flow to the testicle.

\* **Nuclear scan:** In some cases, a nuclear scan may be used to assess blood flow to the testicle.

Treatment:

\* **Emergency surgery:** Testicular torsion is a surgical emergency. The twisted testicle needs to be untwisted and fixed to the scrotum to prevent it from happening again.

\* **Manual detorsion:** In some cases, a doctor may be able to manually untwist the testicle, but surgery is usually still required to prevent recurrence.

Complications:

\* **Testicular loss:** If not treated promptly, testicular torsion can lead to the loss of the testicle.

\* **Infertility:** Even with successful treatment, there is a risk of

infertility, especially if the torsion lasts for a long time.

Prevention:

- \* Early recognition of symptoms: It is important to seek medical attention immediately if you experience sudden scrotal pain.

- \* Surgery to prevent recurrence: If you have a bell clapper deformity, surgery can be done to fix the testicle to the scrotum and prevent torsion.

Key points:

- \* Testicular torsion is a medical emergency.

- \* Early diagnosis and treatment are crucial to save the testicle.

- \* If you experience sudden scrotal pain, seek medical attention immediately.

Station: 4:  
Preterm Labour

- \* What is diagnosis?

Based on the information provided, the likely diagnosis is preterm labor. The patient is showing signs of labor (regular uterine contractions and cervical dilation) before 37 weeks of gestation.

- \* 4 fetal OR neonatal complications

Preterm birth carries several potential complications for the fetus and newborn. Here are four examples:

- \* Respiratory distress syndrome: Premature lungs may not be fully developed, leading to difficulty breathing.

- \* Intraventricular hemorrhage: Bleeding in the brain can occur due to fragile blood vessels.

\* Necrotizing enterocolitis: Damage to the intestinal lining can occur.

\* Retinopathy of prematurity: Abnormal blood vessel growth in the retina can lead to vision problems.

\* drugs to stop delivery.

Tocolytic medications are used to stop or slow down contractions and delay delivery in cases of preterm labor. Some common tocolytics include:

\* Nifedipine (a calcium channel blocker)

\* Magnesium sulfate

\* Indomethacin (a prostaglandin inhibitor)

Additional Considerations:

\* Risk Factors: It would be important to identify any risk factors for preterm labor in this patient's history.

\* Fetal Monitoring: Continuous fetal monitoring is crucial to assess the well-being of the fetus during tocolytic therapy.

\* Delivery Planning: If preterm labor cannot be stopped, plans for delivery in a facility equipped to care for premature infants should be made.

## Station 5:

\* A woman G3p1+1 presents in the labor room at 32 weeks gestation with a sudden gush of fluid per vagina three hours back.

Questions:

\* What is the diagnosis?

\* Give two differential diagnoses?

- \* Give two investigations?
- \* Write down the drugs to reduce the risk of respiratory distress syndrome.

Answers:

- \* What is the diagnosis?

The most likely diagnosis is Premature Rupture of Membranes (PROM). This is where the amniotic sac (bag of waters) surrounding the baby breaks before the onset of labor.
- \* Give two differential diagnoses?
  - \* Preterm Labor: This is when labor starts before 37 weeks of pregnancy.
  - \* Urinary Incontinence: This is the involuntary leakage of urine.
- \* Give two investigations?
  - \* Amniotic Fluid Testing: To confirm the rupture of membranes and assess the presence of infection. This can be done through sterile speculum examination or by checking for ferning of the fluid under a microscope.
  - \* Fetal Monitoring: To assess the baby's well-being, including heart rate and movements.
- \* Write down the drugs to reduce the risk of respiratory distress syndrome.
  - \* Corticosteroids: These drugs (like betamethasone or dexamethasone) are given to the mother to help the baby's lungs mature faster. They are typically administered in two doses, 24 hours apart.

# Station 6 :-

Certainly, let's explore the potential causes of collapse after vaginal delivery.

Collapse after vaginal delivery refers to a sudden deterioration in the mother's condition, often characterized by hypotension (low blood pressure), tachycardia (rapid heart rate), and altered mental status.

Here are 6 differential diagnoses for collapse after vaginal delivery:

- \* Postpartum Hemorrhage (PPH): This is a leading cause of maternal mortality. It can be classified as early (within 24 hours) or late (after 24 hours). Causes include uterine atony (failure of the uterus to contract), retained placental fragments, trauma to the birth canal, and coagulopathies.

- \* Amniotic Fluid Embolism (AFE): This rare but life-threatening condition occurs when amniotic fluid, fetal cells, or other debris enters the maternal circulation, triggering a cascade of events, including anaphylaxis and disseminated intravascular coagulation (DIC).

- \* Sepsis: Infection can occur after delivery due to various sources, such as retained placental fragments, endometritis, or urinary tract infection. Sepsis can lead to severe hypotension and organ dysfunction.

- \* Cardiac Arrest: Underlying cardiac conditions or complications of anesthesia can lead to cardiac arrest during or after delivery.

- \* Anaphylaxis: This can occur due to allergies to

medications (like anesthetics) or blood products used during delivery.

\* Neurological Conditions: Conditions like stroke or seizures can cause sudden collapse in the postpartum period.

Important Note: This list is not exhaustive, and other conditions could be considered depending on the specific circumstances of the case.

If you suspect a mother has collapsed after delivery, it is crucial to:

\* Call for immediate medical assistance: This is a life-threatening situation that requires prompt intervention.

\* Assess the mother's ABCs: Check for airway obstruction, breathing difficulties, and circulation.

\* Begin resuscitation efforts if necessary: This may involve CPR and the use of medications to support blood pressure and heart function.

Station: 8:

You said:

Picture of child with muscle wasting and abdominal distention

What are 2 features in this child

Diagnosis

1 differential diagnosis

ChatGPT said:

ChatGPT

The picture you're referring to with muscle wasting and abdominal distention typically suggests Kwashiorkor, a severe form of protein malnutrition.

Features in the child:

Muscle wasting – The child will have a loss of muscle mass, especially noticeable in the limbs, due to protein deficiency.

Abdominal distention – A swollen belly caused by fluid accumulation (ascites) or weakened abdominal muscles due to malnutrition.

Diagnosis:

Kwashiorkor (protein-energy malnutrition)

Differential Diagnosis:

Marasmus – Another form of malnutrition that results from severe calorie deficiency, where the child looks emaciated without the edema or abdominal distention seen in Kwashiorkor.

These conditions are both seen in children with severe malnutrition but have distinct features like edema in Kwashiorkor and overall wasting in Marasmus.

Station 9:

The fetal skull dimension that negotiates most significantly during normal labor is the suboccipitobregmatic diameter.

Here's why:

\* Molding: The fetal skull bones are not fully fused, allowing them to overlap slightly during labor. This process, called molding, reduces the head's diameter, enabling it to pass through the birth canal more easily.

\* Suboccipitobregmatic Diameter: This is the smallest

anteroposterior diameter of the fetal skull. It extends from the undersurface of the occipital bone to the center of the anterior fontanelle.

Other Fetal Skull Diameters:

While molding affects all diameters, the suboccipitobregmatic diameter is the most crucial due to its smaller size. Other important diameters include:

\* Biparietal Diameter: The largest transverse diameter of the fetal skull.

\* Occipitofrontal Diameter: An anteroposterior diameter larger than the suboccipitobregmatic.

Visual Representation:

Remember: The ability of the fetal skull to mold is essential for successful vaginal delivery. If the fetal head is too large or the maternal pelvis is too small, it can lead to complications like cephalopelvic disproportion (CPD).

## Station 10:

### Insulin Injection:

① Insulin

② Complications:

- Skin reaction → Allergy → Burning Swelling
- Anaphylaxis.
- Lipodystrophy.

# Station 12:

A partogram is a graphical representation of the progress of labor, and it typically includes the following components:

## # Maternal Information

1. \*Name and ID\*: Patient's name and identification number
2. \*Age and parity\*: Patient's age and number of previous births

## # Labor Progress

1. \*Cervical dilation\*: Graphical representation of cervical dilation (in cm) against time
2. \*Fetal station\*: Graphical representation of fetal station (in cm) against time
3. \*Effacement\*: Percentage of cervical effacement

## # Fetal Monitoring

1. \*Fetal heart rate\*: Graphical representation of fetal heart rate against time
2. \*Fetal movement\*: Documentation of fetal movement

## # Maternal Monitoring

1. \*Blood pressure\*: Graphical representation of maternal blood pressure against time
2. \*Pulse\*: Graphical representation of maternal pulse against time
3. \*Temperature\*: Graphical representation of maternal

temperature against time

## # Labor Interventions

1. \*Oxytocin administration\*: Documentation of oxytocin administration, including dosage and duration
2. \*Artificial rupture of membranes\*: Documentation of artificial rupture of membranes
3. \*Epidural anesthesia\*: Documentation of epidural anesthesia administration

## # Delivery Outcomes

1. \*Mode of delivery\*: Documentation of the mode of delivery (vaginal or cesarean section)
2. \*Birth weight\*: Documentation of the baby's birth weight
3. \*Apgar scores\*: Documentation of the baby's Apgar scores at 1 and 5 minutes after birth.

Station: 13:

Varicoceles are the enlargement of the veins within the scrotum. The grading of varicoceles is as follows:

\* Grade 0: The varicocele cannot be felt or seen and can only be detected by ultrasound.

\* Grade 1: The varicocele can only be felt during a Valsalva maneuver.

\* Grade 2: The varicocele can be felt when standing without performing a Valsalva maneuver.

- \* Grade 3: The varicocele is visible and can be felt without a Valsalva maneuver.

Varicoceles are commonly diagnosed during a physical examination of the scrotum. Other diagnostic tests may include:

- \* Ultrasound: An ultrasound can confirm the diagnosis and assess the severity of the varicocele.

- \* Semen analysis: A semen analysis may be performed to check for infertility.

- \* Hormone tests: Hormone tests may be performed to rule out other causes of infertility.

The most common symptom of a varicocele is a painless lump or swelling in the scrotum. Other symptoms may include:

- \* Scrotal discomfort or heaviness

- \* Aching pain in the scrotum or groin

- \* Infertility

Treatment for varicoceles is typically only recommended if the varicocele is causing symptoms or infertility. Treatment options include:

- \* Watchful waiting: If the varicocele is not causing any symptoms, no treatment may be necessary.

- \* Surgery: Surgery is the most common treatment for varicoceles. There are several different surgical procedures available, including:

- \* Varicocelectomy: This is the most common surgical procedure for varicoceles. It involves tying off the enlarged veins.

- \* Percutaneous embolization: This is a minimally invasive procedure that involves injecting a substance into the

enlarged veins to block blood flow.

\* Scrotal support: Wearing a scrotal support may help to reduce discomfort from a varicocele.

## Station 15:

Shoulder dystocia is a complication of childbirth that occurs when the baby's shoulders become stuck behind the mother's pubic bone after the head has delivered. It is a serious condition that can lead to complications for both the mother and the baby.

Causes of shoulder dystocia include:

- \* Fetal macrosomia (large baby): Babies who are large for gestational age are at increased risk of shoulder dystocia.
- \* Maternal obesity: Obesity can increase the risk of shoulder dystocia by making it more difficult for the baby to pass through the birth canal.
- \* Gestational diabetes: Gestational diabetes can cause babies to grow larger than normal, which increases the risk of shoulder dystocia.
- \* Previous shoulder dystocia: Women who have had shoulder dystocia in a previous pregnancy are at increased risk of having it again.
- \* Assisted vaginal delivery: The use of forceps or vacuum extraction during delivery can increase the risk of shoulder dystocia.

Treatment for shoulder dystocia involves a number of maneuvers to help deliver the baby's shoulders. These maneuvers may include:

\* McRoberts maneuver: The mother's legs are flexed up onto her abdomen, which can help to widen the pelvis.

\* Suprapubic pressure: Pressure is applied to the mother's abdomen just above the pubic bone to help dislodge the baby's shoulder.

\* Internal maneuvers: The doctor may reach into the vagina to manually rotate the baby's shoulder.

In some cases, it may be necessary to deliver the baby by cesarean section.

# Day 3: Station 1:

## Central DI:

This is for informational purposes only. For medical advice or diagnosis, consult a professional.

Central diabetes insipidus (CDI) is a rare condition caused by the body's inability to produce or properly use antidiuretic hormone (ADH), also known as vasopressin. ADH is a hormone that helps the kidneys control the amount of water your body loses through urine.

Causes:

\* Damage to the hypothalamus or pituitary gland: This can be caused by:

\* Head injuries

\* Brain tumors

\* Brain surgery

\* Infections

\* Inflammation

\* Inherited disorders

\* Certain medications: Some medications, such as lithium and tetracycline, can interfere with the body's ability to produce or use ADH.

Investigations:

\* Water deprivation test: This test measures how much your urine output increases when you are deprived of fluids.

\* Desmopressin stimulation test: This test measures how your urine output changes in response to desmopressin, a synthetic form of ADH.

Urine and plasma osmolality

- \* Blood tests: To check for electrolyte imbalances and other underlying conditions.

- \* Imaging tests: Such as MRI or CT scans, to look for tumors or other abnormalities in the brain.

Treatment:

The goal of treatment for CDI is to replace the missing ADH and manage symptoms. Treatment options include:

- \* Desmopressin: This medication is available as a nasal spray or tablet and can help reduce urine output and thirst.

- \* Fluid replacement: Drinking plenty of fluids is important to prevent dehydration.

- \* Dietary changes: Limiting salt intake can help reduce fluid loss.

- \* Treating the underlying cause: If CDI is caused by an underlying condition, such as a tumor, treatment of the underlying condition may improve symptoms.

## Station 2:

This is for informational purposes only. For medical advice or diagnosis, consult a professional.

Diabetic ketoacidosis (DKA) is a serious complication of diabetes that occurs when the body produces high levels of blood acids called ketones. This condition develops when your body can't produce enough insulin.

Clinical Features:

- \* Early symptoms:

- \* Excessive thirst

- \* Frequent urination

- \* High blood glucose levels

- \* High levels of ketones in the urine
- \* As the condition progresses:
  - \* Nausea and vomiting
  - \* Abdominal pain
  - \* Fruity-smelling breath
  - \* Confusion
  - \* Rapid breathing
  - \* Loss of consciousness

#### Diagnosis:

- \* Blood and glucose test: Shows significantly elevated blood sugar levels.
- \* Blood and urine ketone test: Detects the presence and levels of ketones in the blood.
- \* Blood gas analysis: Measures the acidity (pH) and levels of carbon dioxide and bicarbonate in the blood.
- \* Electrolyte panel: Checks for imbalances in electrolytes like sodium, potassium, and chloride.

#### Management:

- \* Fluid replacement: To rehydrate the body and restore blood volume.
- \* Insulin therapy: To lower blood glucose levels and stop ketone production.
- \* Electrolyte replacement: To correct imbalances and prevent complications.
- \* Monitoring: Close monitoring of vital signs, blood glucose, and electrolytes is crucial.

#### Management in Children and Adults:

The general principles of DKA management are similar for both children and adults, but there are some key differences:

- \* Children:

- \* May require lower doses of insulin.
- \* More prone to cerebral edema (brain swelling), which can be a life-threatening complication.
- \* Close monitoring for signs of cerebral edema is essential.
- \* Adults:
  - \* May have underlying medical conditions that complicate DKA management.
  - \* More likely to have comorbidities like heart disease or kidney disease.
  - \* DKA may be triggered by infections or other illnesses.

#### Prevention:

- \* Careful monitoring of blood glucose levels: Regular testing helps detect high blood sugar early.
- \* Proper insulin administration: Following the prescribed insulin regimen is crucial.
- \* Sick day management: Adjusting insulin and fluid intake during illness is important.

## Station 4 & 5:

### Station 5

The patient is presenting with a critical obstetric emergency: eclampsia. Eclampsia is a severe complication of preeclampsia, characterized by seizures in a woman with preeclampsia.

#### Differential Diagnoses:

- \* Eclampsia: The most likely diagnosis given the presentation of seizures in a hypertensive pregnant woman.
- \* Preeclampsia with severe features: This diagnosis would be considered if the patient had not yet experienced seizures

but exhibited severe features of preeclampsia, such as severe hypertension, thrombocytopenia, elevated liver enzymes, or impaired kidney function.

\* Other causes of seizures: While less likely in this context, it's important to consider other potential causes of seizures, such as epilepsy or central nervous system infections.

Management:

\* Stabilize the patient:

\* Airway management: Ensure a patent airway and adequate oxygenation. This may involve intubation if the patient is unconscious or having difficulty breathing.

\* Control seizures: Administer magnesium sulfate intravenously to prevent further seizures.

\* Lower blood pressure: Gradually reduce blood pressure to avoid sudden drops that could compromise placental blood flow. Antihypertensive medications like hydralazine or labetalol can be used.

\* Monitor vital signs: Continuously monitor blood pressure, heart rate, respiratory rate, and oxygen saturation.

\* Deliver the baby: Since the patient is at 36 weeks gestation, delivery is the definitive treatment for eclampsia.

\* Mode of delivery: The optimal mode of delivery depends on several factors, including fetal presentation, cervical status, and maternal condition. Options include vaginal delivery or cesarean section.

\* Timing of delivery: The timing of delivery should be based on the clinical judgment of the healthcare provider, considering the risks and benefits for both mother and baby.

\* Postpartum care:

\* Continue monitoring: Closely monitor the mother for

postpartum complications, such as hemorrhage, infection, and continued hypertension.

\* Support: Provide emotional and practical support to the mother and her family.

Additional Considerations:

\* Fetal monitoring: Continuous fetal heart rate monitoring is crucial throughout the management of eclampsia.

\* Laboratory tests: Obtain blood tests to assess liver function, kidney function, platelet count, and coagulation status.

## Station 6:

### Station 6

Anemia in pregnancy, a condition where the blood doesn't have enough healthy red blood cells, can lead to several maternal complications:

\* Increased risk of preterm birth: Anemia can weaken the uterus, making it more likely to contract prematurely and lead to early delivery.

\* Low birth weight: Babies born to anemic mothers are more likely to have low birth weight, which can increase their risk of health problems.

\* Postpartum hemorrhage: After delivery, anemic women are at a higher risk of excessive bleeding due to their body's reduced ability to clot blood.

\* Increased risk of infections: Anemia can weaken the immune system, making it harder for the body to fight off infections.

\* Maternal fatigue and weakness: Anemia can cause severe

fatigue and weakness, making it difficult for pregnant women to carry out daily activities and take care of themselves and their babies.

Treatment for anemia in pregnancy typically involves:

- \* Iron supplements: Iron is a crucial component of red blood cells, and supplementation is often the first line of treatment.
- \* Dietary changes: Encouraging the consumption of iron-rich foods like leafy green vegetables, red meat, and beans can help improve iron levels.
- \* Vitamin and mineral supplements: In some cases, supplements containing folic acid, vitamin B12, and other essential nutrients may be recommended.
- \* Treating underlying causes.

## Station 11:

### Station 11

#### Hydrocele in a 4-Year-Old Boy:

A hydrocele is a fluid-filled sac around one or both testicles. In most cases, it's harmless and disappears on its own.

However, if it persists or grows larger, it may require medical attention.

#### Investigations:

- \* Physical examination: A doctor will examine the scrotum to assess the size, consistency, and transillumination (shining a light through the scrotum to see if it's fluid-filled).
- \* Ultrasound: An ultrasound can help confirm the diagnosis and rule out other conditions like a hernia or testicular tumor.

#### Diagnosis:

The diagnosis is typically made based on the physical

examination and ultrasound findings.

Treatment:

\* Observation: If the hydrocele is small and not causing any discomfort, the doctor may recommend observation. Most hydroceles resolve spontaneously within the first year of life.

\* Surgery: If the hydrocele persists, grows larger, or causes discomfort, surgery may be recommended. The two main surgical procedures for hydrocele are:

\* Hydrocelectomy: This involves making a small incision in the scrotum and draining the fluid.

\* Ligation of the processus vaginalis: This procedure involves closing off the passage between the abdomen and the scrotum, preventing fluid from accumulating.

Complications of Surgery:

\* Infection: There is a small risk of infection at the surgical site.

\* Hemorrhage: Bleeding can occur during or after surgery.

\* Recurrence: The hydrocele may return after surgery.

\* Damage to the testicle: There is a very small risk of damage to the testicle during surgery.

Varicocele :

This is for informational purposes only. For medical advice or diagnosis, consult a professional.

Varicoceles in Elderly Individuals

Varicoceles are dilated veins within the scrotum, often described as a "bag of worms." While common in younger

men, they can also occur in older individuals. In elderly men, varicoceles may not always require treatment, especially if they are asymptomatic. However, if they cause discomfort or are associated with fertility issues, treatment options can be considered.

Picture of Varicocele:

Investigations:

- \* **Physical Examination:** A physical examination by a healthcare provider is crucial to diagnose a varicocele. The provider will examine the scrotum for any enlargement or dilated veins.

- \* **Scrotal Ultrasound:** An ultrasound of the scrotum can confirm the diagnosis and assess the severity of the varicocele. It can also help rule out other potential causes of scrotal swelling.

Treatment Options:

In many cases, no treatment is necessary for varicoceles in elderly men, especially if they are asymptomatic. However, if the varicocele causes discomfort or is associated with fertility issues, treatment options may include:

- \* **Observation:** If the varicocele is small and doesn't cause any symptoms, your doctor may recommend monitoring it without treatment.

- \* **Pain Management:** Over-the-counter pain relievers like ibuprofen or acetaminophen can help manage discomfort associated with varicoceles.

- \* **Surgery:** In some cases, surgery may be recommended to correct the varicocele. Surgical options include:

- \* **Open Varicocelectomy:** This is the traditional surgical approach, where an incision is made in the groin to access

and tie off the dilated veins.

\* Laparoscopic Varicocelectomy: This minimally invasive procedure involves small incisions in the abdomen to access and repair the veins.

\* Radiofrequency Ablation: This minimally invasive procedure uses heat to seal off the dilated veins.

Important Considerations:

\* Fertility: If the varicocele is affecting fertility, treatment may be recommended regardless of age.

\* Symptoms: If the varicocele is causing significant discomfort or pain, treatment may be considered.

\* Age and Overall Health: The decision to treat a varicocele will also depend on the individual's age and overall health. If you are concerned about a varicocele, it is important to consult with a healthcare provider to discuss your specific situation and determine the best course of treatment.

*grading of varicocele : —*

This is for informational purposes only. For medical advice or diagnosis, consult a professional.

Varicoceles are graded based on their size and how easily they can be detected. Here's a common grading system:

\* Grade 0: The varicocele is not palpable (can't be felt) and can only be detected with an ultrasound.

\* Grade 1: The varicocele is palpable only during a Valsalva maneuver (straining or bearing down).

\* Grade 2: The varicocele is palpable when standing without a Valsalva maneuver.

\* Grade 3: The varicocele is visible through the scrotal skin.

The grading system helps determine the severity of the varicocele and guide treatment decisions.

## Station 14 : Cushing's Synd:

This is for informational purposes only. For medical advice or diagnosis, consult a professional.

Moon face, also known as Cushingoid facies, is a condition characterized by facial fullness and roundness, often accompanied by other symptoms like weight gain, striae (stretch marks), and easy bruising. It is most commonly caused by elevated levels of the hormone cortisol.

Diagnosis:

The diagnosis of moon face involves a thorough medical history and physical examination, along with specific investigations to determine the underlying cause of elevated cortisol levels.

Investigations:

\* Blood Tests: Blood tests are essential to measure cortisol levels and assess the function of the adrenal glands and pituitary gland. These tests may include:

\* Cortisol levels: To check for elevated cortisol levels.

\* ACTH (Adrenocorticotropic hormone) levels: To assess the function of the pituitary gland, which controls cortisol production.

\* 24-hour urine free cortisol: To measure the amount of cortisol excreted in the urine over 24 hours.

\* Imaging Studies: Imaging studies can help identify the cause of excess cortisol production, such as tumors in the adrenal glands or pituitary gland. Common imaging tests include:

\* CT scan (Computed Tomography scan): To visualize the

adrenal glands and pituitary gland.

\* MRI (Magnetic Resonance Imaging): To obtain more detailed images of the adrenal glands and pituitary gland.

Other Possible Investigations:

Depending on the suspected cause and individual circumstances, other investigations may be considered, such as:

\* Dexamethasone suppression test: To assess the function of the pituitary gland.

\* Petrosal sinus sampling: To measure ACTH levels in the blood draining from the pituitary gland.

Note: The specific investigations will be determined by your doctor based on your individual symptoms and medical history.

If you are concerned about moon face or any of the associated symptoms, it is important to consult with a healthcare professional for proper evaluation and diagnosis.

Day 4:-

• Station 1: Bishop Score.

Cervix	Score			
	0	1	2	3
Position	Posterior	Midposition	Anterior	Anterior
Consistency	Firm	Medium	Soft	Soft
Effacement	0-30% <i>&gt; 4cm</i>	40-50% <i>3-4cm</i>	60-70% <i>1-2cm</i>	80-100% <i>0</i>
Dilation	Closed	1-2 cms	3-4 cms	5 cms+
Station	-3	-2	-1	+1, +2

Station 2

APGAR score:

# Apgar Scoring System

Indicator		0 Points	1 Point	2 Points
A	Activity (muscle tone)	Absent	Flexed limbs	Active
P	Pulse	Absent	< 100 BPM	> 100 BPM
G	Grimace (reflex irritability)	Floppy	Minimal response to stimulation	Prompt response to stimulation
A	Appearance (skin color)	Blue Pale	Pink body Blue extremities	Pink
R	Respiration	Absent	Slow and irregular	Vigorous cry



## Station 4

PPROM: incidence:

• Risk factors: / causes

- ↳ Infections - Chorioamnionitis
- ↳ Smoking / substance abuse
- ↳ Previous PPROM or preterm
- ↳ multiple gestation.
- ↳ cervical insufficiency
- ↳ polyhydramnios.

- Dx: • Clinical Hx: = sudden gush of fluids from vagina
- Speculum Exam → vaginal fluid / pooling.
  - Nitrazine Test: Amniotic fluid turns nitrazine paper Blue due to alkalinity.
  - Ferning Test: microscopic exam of dried amniotic fluid looks like fetal cells being.

Complications - maternal infections  
- fetal sepsis, prematurity.  
pulm Hypoplasia.

Management: if < 34 wks  
↳ experienced management  
+ admit + steroids + Ab + close monitoring

• if 34-37 wks . consider delivery if any signs of inf or fetal distress or lung immaturity:

if > 37 wks : Delivery.

• Monitoring of fetal well being.

# Station: 5: Breech:

Here's an overview of breech presentation:

## # Definition

Breech presentation occurs when a baby's buttocks or feet are positioned to be born first, rather than the head.

## # Incidence

- About 3-4% of pregnancies at term (37-42 weeks) present with breech.
- Before 28 weeks, breech presentation is common (about 20-30%).

## # Causes

The exact cause of breech presentation is often unknown, but possible factors include:

1. **\*Premature birth\***: Babies born prematurely are more likely to be breech.
2. **\*Multiple pregnancy\***: Carrying twins or other multiples increases the risk of breech.
3. **\*Uterine abnormalities\***: An abnormally shaped uterus or fibroids can increase the risk of breech.
4. **\*Previous breech delivery\***: Women who have had a previous breech delivery are more likely to have another breech baby.
5. **\*Placenta previa\***: A placenta that covers the cervix can increase the risk of breech.

## # Risk Factors

Factors that increase the risk of breech presentation include:

1. **\*Advanced maternal age\***: Women over 35 years old are at higher risk.
2. **\*Previous uterine surgery\***: Women who have had a previous C-section or other uterine surgery are at higher risk.
3. **\*Family history\***: Women with a family history of breech presentations are at higher risk.
4. **\*Smoking\***: Smoking during pregnancy increases the risk of breech.
5. **\*Fetal growth restriction\***: Babies that are smaller than expected may be more likely to be breech.

Station 6: OCP / POP.

Here's an overview of the mechanism of action of Oral Contraceptive Pills (OCPs) and Progestin-Only Pills (POPs):

### **\*Oral Contraceptive Pills (OCPs)\***

OCPs, also known as combined oral contraceptives, contain both estrogen and progestin. Their mechanism of action involves:

1. **\*Inhibition of ovulation\***: Estrogen and progestin work together to suppress the release of gonadotropin-releasing hormone (GnRH) from the hypothalamus, which in turn reduces the release of follicle-stimulating hormone (FSH)

and luteinizing hormone (LH) from the pituitary gland. This prevents ovulation.

2. **\*Thickening of cervical mucus\***: Progestin causes the cervical mucus to become thicker and more impenetrable, making it difficult for sperm to pass through.

3. **\*Endometrial changes\***: Progestin also causes the endometrium to become thinner and less receptive to implantation, making it less likely for a fertilized egg to implant.

### **\*Progestin-Only Pills (POPs)\***

POPs, also known as mini-pills, contain only progestin. Their mechanism of action involves:

1. **\*Thickening of cervical mucus\***: Progestin causes the cervical mucus to become thicker and more impenetrable, making it difficult for sperm to pass through.

2. **\*Endometrial changes\***: Progestin causes the endometrium to become thinner and less receptive to implantation, making it less likely for a fertilized egg to implant.

3. **\*Inhibition of ovulation\***: While POPs do not consistently inhibit ovulation, they may affect the timing and frequency of ovulation, making it less likely for fertilization to occur.

It's worth noting that POPs are less effective than OCPs in preventing ovulation, and their primary mechanism of action is through the thickening of cervical mucus and endometrial changes.

## Station: 8 eclampsia management

Eclampsia is a severe complication of preeclampsia, characterized by seizures in a pregnant woman.

Management of eclampsia involves:

### # Initial Management

1. **\*Stabilize the patient\***: Ensure airway, breathing, and circulation (ABCs) are stable.
2. **\*Control seizures\***: Administer magnesium sulfate (MgSO<sub>4</sub>) as a loading dose, followed by a maintenance dose.
3. **\*Monitor vital signs\***: Continuously monitor blood pressure, pulse, oxygen saturation, and fetal heart rate.

### # Pharmacological Management

1. **\*Magnesium sulfate (MgSO<sub>4</sub>)\***: First-line treatment for eclampsia. Loading dose: 4-6 g IV, followed by maintenance dose: 1-2 g/hour IV.
2. **\*Antihypertensives\***: Use medications like labetalol, hydralazine, or nifedipine to control blood pressure.

### # Supportive Care

1. **\*Fluid management\***: Administer IV fluids to maintain adequate hydration and urine output.
2. **\*Oxygen therapy\***: Provide supplemental oxygen to maintain oxygen saturation > 90%.
3. **\*Fetal monitoring\***: Continuously monitor fetal heart rate and well-being.

### # Delivery

1. **\*Expeditious delivery\***: Deliver the baby as soon as

possible, preferably within 24 hours.

2. **\*Mode of delivery\***: Vaginal delivery is preferred, but cesarean section may be necessary in some cases.

### # Postpartum Care

1. **\*Continue MgSO<sub>4</sub>\***: Maintain MgSO<sub>4</sub> infusion for 24 hours postpartum.

2. **\*Monitor for complications\***: Watch for signs of complications, such as hemorrhage, infection, or stroke.

3. **\*Blood pressure management\***: Continue antihypertensive therapy as needed.

### # Key Considerations

1. **\*Multidisciplinary team\***: Manage eclampsia with a team of obstetricians, anesthesiologists, and nurses.

2. **\*Close monitoring\***: Continuously monitor the patient's vital signs, fetal well-being, and laboratory results.

3. **\*Individualized care\***: Tailor management to the patient's specific needs and circumstances.

## Station 10: Dialysis Counselling:

Dialysis counseling is an essential aspect of caring for patients with end-stage renal disease (ESRD). Here's an overview of the key points to discuss:

### # Pre-Dialysis Counseling

1. **\*Modality options\***: Explain the different types of dialysis, including hemodialysis (HD), peritoneal dialysis (PD), and continuous ambulatory peritoneal dialysis (CAPD).

2. **\*Lifestyle changes\***: Discuss the impact of dialysis on daily life, including dietary restrictions, fluid management, and travel considerations.
3. **\*Vascular access\***: Explain the importance of creating a vascular access (e.g., arteriovenous fistula, graft, or catheter) for HD.

### # Hemodialysis (HD) Counseling

1. **\*Treatment schedule\***: Explain the typical HD schedule (e.g., 3 times a week, 3-4 hours per session).
2. **\*Dietary restrictions\***: Emphasize the importance of following a renal diet, including limitations on fluid, sodium, potassium, and phosphorus intake.
3. **\*Medication management\***: Discuss the need for medications to manage anemia, bone disease, and other ESRD-related conditions.

### # Peritoneal Dialysis (PD) Counseling

1. **\*Treatment options\***: Explain the different types of PD, including continuous ambulatory peritoneal dialysis (CAPD), continuous cycling peritoneal dialysis (CCPD), and automated peritoneal dialysis (APD).
2. **\*Exchange procedure\***: Demonstrate the PD exchange procedure, including connecting and disconnecting the dialysis solution bags.
3. **\*Infection prevention\***: Emphasize the importance of proper hand hygiene, exit-site care, and infection prevention techniques.

### # Ongoing Counseling and Support

1. **\*Regular follow-up\***: Schedule regular follow-up appointments to monitor the patient's condition, address concerns, and adjust treatment plans as needed.
2. **\*Psychological support\***: Provide emotional support and counseling to help patients cope with the physical and emotional challenges of dialysis.
3. **\*Education and resources\***: Offer educational materials, resources, and referrals to help patients manage their condition and improve their quality of life.

## Station: 11:

Here's an overview of episiotomy types, early complications, and late complications:

### # Episiotomy Types

1. **\*Median episiotomy\***: A cut made directly downward from the back of the vagina toward the anus.
2. **\*Mediolateral episiotomy\***: A cut made at an angle from the back of the vagina, directed away from the anus.

### # Early Complications

1. **\*Bleeding\***: Excessive bleeding from the episiotomy site.
2. **\*Infection\***: Bacterial infection of the episiotomy site, which can lead to abscesses or cellulitis.
3. **\*Pain\***: Severe pain or discomfort at the episiotomy site.
4. **\*Swelling\***: Swelling or hematoma at the episiotomy site.

### # Late Complications

1. **\*Scar tissue formation\***: Formation of scar tissue, which can lead to chronic pain or discomfort.

2. **\*Dyspareunia\***: Painful intercourse due to scar tissue or adhesions.
3. **\*Fistula formation\***: Abnormal connection between the vagina and rectum or bladder.
4. **\*Incontinence\***: Urinary or fecal incontinence due to damage to the anal sphincter or pelvic floor muscles.
5. **\*Chronic pain\***: Ongoing pain or discomfort at the episiotomy site.
6. **\*Sexual dysfunction\***: Difficulty with sexual arousal, orgasm, or satisfaction due to episiotomy complications.

## Station : 12 :

Here's a comprehensive overview of nephrolithiasis and recurrent kidney stones management, including lifestyle modifications:

### # Nephrolithiasis Management

1. **\*Pain management\***: Use analgesics such as NSAIDs or opioids to control pain.
2. **\*Hydration\***: Encourage patients to drink plenty of water (at least 2-3 liters/day) to help flush out stones.
3. **\*Medical expulsive therapy\***: Use medications like alpha-blockers to help pass stones.
4. **\*Surgical intervention\***: Consider surgery for large stones, obstructing stones, or stones causing severe symptoms.

### # Recurrent Kidney Stones Management

1. **\*Metabolic evaluation\***: Conduct a thorough metabolic evaluation to identify underlying causes of stone formation.

2. **\*Dietary modifications\***: Advise patients to follow a diet low in:
  - Sodium
  - Animal protein
  - Oxalate-rich foods (e.g., spinach, beets)
  - Calcium (if excessive)
3. **\*Supplementation\***: Consider supplementing with:
  - Potassium citrate to alkalinize urine
  - Magnesium to reduce oxalate absorption
4. **\*Monitoring\***: Regularly monitor patients for:
  - Urine pH
  - Urine calcium and oxalate levels
  - Kidney function

## # Lifestyle Modifications

1. **\*Hydration\***: Encourage patients to drink plenty of water throughout the day.
2. **\*Diet\***: Advise patients to follow a balanced diet with plenty of fruits, vegetables, and whole grains.
3. **\*Weight management\***: Encourage patients to maintain a healthy weight to reduce the risk of stone formation.
4. **\*Physical activity\***: Encourage regular physical activity to help improve overall health.
5. **\*Stress management\***: Encourage patients to practice stress-reducing techniques, such as meditation or yoga.

## # Specific Dietary Recommendations

1. **\*Calcium intake\***: Ensure adequate calcium intake (1,000-1,200 mg/day) from food sources or supplements.
2. **\*Oxalate intake\***: Limit oxalate-rich foods, such as:

- Spinach
- Beets
- Rhubarb
- Strawberries

3. \*Animal protein intake\*: Limit animal protein intake to 6-8 ounces (170-225 grams) per day.

4. \*Sodium intake\*: Limit sodium intake to less than 2,300 milligrams per day.

By following these management strategies and lifestyle modifications, patients with nephrolithiasis and recurrent kidney stones can reduce their risk of stone formation and improve their overall health.

## Station 13:

Here's a comprehensive overview of nephrotic syndrome, including its signs, symptoms, and management:

### # Definition

Nephrotic syndrome is a kidney disorder characterized by excessive loss of protein in the urine, leading to low levels of albumin in the blood.

### # Signs and Symptoms

1. \*Severe swelling (edema)\*: Face, hands, feet, and abdomen
2. \*Proteinuria\*: Excessive protein in the urine (>3.5g/24 hours)
3. \*Hypoalbuminemia\*: Low levels of albumin in the blood

(<3g/dL)

4. \*Hyperlipidemia\*: Elevated levels of lipids (cholesterol and triglycerides) in the blood
5. \*Weight gain\*: Due to fluid retention
6. \*Fatigue\*: Feeling weak and tired
7. \*Foamy urine\*: Due to excessive protein loss

## # Causes

1. \*Glomerulonephritis\*: Inflammation of the glomeruli (kidney filters)
2. \*Diabetic nephropathy\*: Kidney damage due to diabetes
3. \*Focal segmental glomerulosclerosis (FSGS)\*: Scarring of the glomeruli
4. \*Membranous nephropathy\*: Thickening of the glomerular basement membrane
5. \*Minimal change disease\*: Damage to the glomeruli with minimal changes on biopsy

## # Management

### \*Conservative Management\*

1. \*Dietary changes\*: Low-sodium, low-fat diet
2. \*Fluid restriction\*: Limiting fluid intake to reduce edema
3. \*Protein restriction\*: Limiting protein intake to reduce proteinuria
4. \*Diuretics\*: Medications to reduce fluid retention (e.g., furosemide)
5. \*ACE inhibitors or ARBs\*: Medications to reduce proteinuria and slow disease progression

### \*Specific Treatments\*

1. \*Corticosteroids\*: For minimal change disease, FSGS, and other inflammatory causes
2. \*Immunosuppressants\*: For autoimmune causes (e.g., membranous nephropathy)
3. \*Antibiotics\*: For infections (e.g., post-streptococcal glomerulonephritis)

#### \*Complications Management\*

1. \*Hyperlipidemia management\*: Medications to reduce cholesterol and triglyceride levels
2. \*Thrombosis prophylaxis\*: Medications to prevent blood clots (e.g., aspirin, warfarin)
3. \*Infection prophylaxis\*: Medications to prevent infections (e.g., pneumococcal vaccine)

#### \*Referral to Nephrologist\*

Patients with nephrotic syndrome should be referred to a nephrologist for further evaluation and management.

## Station: 14:

Here's a comprehensive overview of congenital hypothyroidism in pediatrics:

### # Definition

Congenital hypothyroidism (CH) is a condition where a newborn's thyroid gland doesn't produce enough thyroid hormones, essential for growth and brain development.

### # Signs and Symptoms

1. Prolonged jaundice: Yellowing of the skin and eyes
2. Umbilical hernia: Protrusion of the belly button
3. Large tongue: Macroglossia
4. Dry skin: Xerosis
5. Cold intolerance: Sensitivity to cold temperatures
6. Poor feeding: Difficulty feeding or showing interest in feeding
7. Vomiting: Frequent vomiting
8. Constipation: Infrequent or hard bowel movements
9. Delayed development: Slowed growth and development
10. Hearing loss: Potential for hearing impairment

## # Causes

1. Thyroid dysgenesis: Abnormal development of the thyroid gland
2. Thyroid ectopia: Abnormal location of the thyroid gland
3. Thyroid dyshormonogenesis: Defects in thyroid hormone production
4. Pituitary or hypothalamic defects: Rare causes of CH

## # Diagnosis

1. Newborn screening: Blood test on heel prick sample
2. Thyroid function tests: TSH, free T4, and free T3 levels
3. Thyroid ultrasound: Imaging to evaluate thyroid gland anatomy
4. Thyroid scintigraphy: Imaging to evaluate thyroid gland function

## # Management

1. Levothyroxine (T4) therapy: Replacement therapy with

synthetic T4

2. Dose adjustment: Regular monitoring and adjustment of T4 dose

3. Regular follow-up: Monitoring of growth, development, and thyroid function

4. Hearing and speech evaluation: Regular assessment of hearing and speech development

5. Neurodevelopmental assessment: Regular assessment of cognitive and motor development

## # Prognosis

With early diagnosis and treatment, most children with CH can lead normal, healthy lives. However, delayed diagnosis or inadequate treatment can result in permanent cognitive and motor impairments.

## Station 15:

Here's a comprehensive overview of Graves' disease:

## # Definition

Graves' disease is an autoimmune disorder that causes hyperthyroidism, leading to excessive production of thyroid hormones.

## # Signs and Symptoms

1. **\*Weight loss\***: Despite increased appetite

2. **\*Palpitations\***: Rapid or irregular heartbeat

3. **\*Tremors\***: Shaky hands or fingers

4. **\*Nervousness\***: Anxiety, irritability, or mood swings

5. **\*Fatigue\***: Muscle weakness or exhaustion
6. **\*Heat intolerance\***: Sensitivity to heat or sweating
7. **\*Changes in menstrual cycle\***: Irregular periods or amenorrhea
8. **\*Enlarged thyroid gland (goiter)\***: Visible swelling in the neck
9. **\*Exophthalmos\***: Bulging eyes or eyelid retraction
10. **\*Skin changes\***: Thin, fragile skin or pretibial myxedema (thickening of skin on shins)

## # Causes

1. **\*Autoimmune response\***: Immune system mistakenly attacks thyroid gland
2. **\*Genetic predisposition\***: Family history of Graves' disease or other autoimmune disorders
3. **\*Hormonal imbalance\***: Excessive production of thyroid-stimulating hormone (TSH)

## # Diagnosis

1. **\*Thyroid function tests (TFTs)\***: TSH, free T4, and free T3 levels
2. **\*Thyroid-stimulating immunoglobulin (TSI) test\***: Measures antibodies that stimulate thyroid gland
3. **\*Radioactive iodine uptake (RAIU) test\***: Measures iodine uptake by thyroid gland
4. **\*Thyroid ultrasound\***: Imaging to evaluate thyroid gland anatomy

## # Management

1. **\*Antithyroid medications\***: Methimazole or propylthiouracil

to reduce thyroid hormone production

2. **\*Beta-blockers\***: Propranolol or metoprolol to manage symptoms like palpitations and tremors
3. **\*Radioactive iodine ablation\***: Destroys part of thyroid gland to reduce hormone production
4. **\*Surgery\***: Thyroidectomy (removal of thyroid gland) in some cases
5. **\*Supportive care\***: Management of symptoms, monitoring of thyroid function, and adjustment of medication as needed

## # Complications

1. **\*Thyroid storm\***: Life-threatening exacerbation of symptoms
2. **\*Osteoporosis\***: Weakened bones due to excessive thyroid hormone production
3. **\*Heart problems\***: Increased risk of heart failure, arrhythmias, or cardiac arrest

Early diagnosis and treatment can help manage Graves' disease and prevent complications.





