

## BLOCK P points from Pre-profs

A rapidly growing, large (12 cm), mobile breast lump in a 55-year-old woman, especially with stretching of the overlying skin and impending ulceration, is highly suggestive of a phyllodes tumor. While carcinoma is a concern, the mobility and rapid growth of a large, often somewhat irregular mass are classic for phyllodes tumors, which can be benign, borderline, or malignant

A solitary intraductal papilloma is the most common cause of unilateral, spontaneous, bloody or serosanguinous nipple discharge from a single duct, especially in the absence of a palpable mass

For a palpable solid breast lump, even if imaging is reassuring, tissue diagnosis is often required for definitive confirmation, especially if there's any uncertainty or patient anxiety. A core needle biopsy provides a histological sample, which is generally preferred over FNAC (cytology) for definitive diagnosis of breast lesions as it provides architectural information. FNAC might be considered but core biopsy is more robust.

The most common sites for distant metastasis from breast cancer are bone, lung, liver, and brain. Bone is very frequently involved, often being the first site of detectable distant metastasis.

Fluctuation is a sign of pus collection within an abscess, but it is typically a later sign, not an early one. Early mastitis presents with pain, redness, warmth, and induration (cellulitis). Fluctuation develops as pus accumulates and liquefaction occurs.

Sinus tachycardia is the most common ECG finding in hyperthyroidism, occurring in the vast majority of patients. Atrial fibrillation is also a significant complication but is less common than sinus tachycardia.

KMC-24

A **"cauliflower-like" appearance within the bladder** classically describes **papillary urothelial carcinoma (transitional cell carcinoma) of the bladder**.

The five components of a standard Biophysical Profile (BPP) are:

1. Non-Stress Test (NST) - assessing fetal heart rate reactivity.
2. Fetal Breathing Movements - presence of at least one episode of rhythmic breathing movements of 30 seconds or more within 30 minutes.
3. Gross Fetal Body Movements - at least three discrete body or limb movements within 30 minutes.
4. Fetal Tone - at least one episode of extension of a fetal extremity with return to flexion, or opening and closing of a hand.
5. Amniotic Fluid Volume (AFV) - assessment of amniotic fluid quantity (e.g., deepest vertical pocket or AFI).

In acute uterine inversion, if the placenta is still attached, the primary goal is to replace the uterus to its normal anatomical position as quickly as possible. It is generally recommended to attempt manual replacement (e.g., Johnson maneuver) with the placenta still attached. Attempting to remove the placenta before uterine replacement can precipitate massive hemorrhage and worsen shock. Once the uterus is repositioned, uterotonics are administered, and then the placenta can be managed.

Transurethral Resection of the Prostate (TURP) is considered the gold standard surgical treatment for symptomatic BPH of this size[45g], offering significant improvement in symptoms and flow. TUIP is generally for smaller prostates (<30g). Open prostatectomy is for very large prostates (>80-100g).

While breast milk is the ideal nutrition for infants, it is relatively low in Vitamin D. Therefore, exclusively breastfed infants are recommended to receive Vitamin D supplementation to prevent rickets and ensure adequate calcium absorption. Vitamin K is also low in breast milk, which is why a prophylactic dose of Vitamin K is given to newborns at birth

The most specific diagnostic test to confirm Graves' disease is the measurement of TSH Receptor Antibodies (TRAb), also known as TSH-stimulating immunoglobulins (TSI)

The combination of constipation, painful defecation, and bright red blood per rectum (often streaking the stool or on toilet paper) in a young child is highly characteristic of an anal fissure.

The classic triad of microangiopathic hemolytic anemia (Hb 8g/dL, likely with schistocytes if smear done), thrombocytopenia (platelets 75,000/ $\mu$ L), and acute kidney injury (elevated BUN/creatinine, oliguria), often following a diarrheal illness (especially E. coli O157:H7), is diagnostic of Hemolytic Uremic Syndrome (HUS). Neurological involvement like seizures can also occur in severe HUS. Petechiae are due to thrombocytopenia.

The presentation of a woman with early pregnancy (2 months amenorrhea) who is in shock (hypotension, tachycardia), complaining of unilateral abdominal pain, and has some vaginal bleeding/discharge is highly suggestive of a ruptured ectopic pregnancy. Hemorrhage from a ruptured ectopic pregnancy can rapidly lead to hypovolemic shock. This is a life-threatening emergency requiring immediate surgical intervention.

GLP-1 receptor analogues (like Liraglutide/Victoza) have been associated with an increased risk of acute pancreatitis, although the absolute risk is low. In a patient taking a GLP-1 analogue who presents with new-onset severe epigastric pain, acute pancreatitis should be considered in the differential diagnosis. Measurement of serum amylase and/or lipase is a key initial investigation for pancreatitis.

postpartum hemorrhage (PPH) is consistently reported as one of the leading, if not the leading, direct causes of maternal mortality in many developing countries, including Pakistan.

This patient has preeclampsia with severe features (severe hypertension, headache, visual disturbances, epigastric pain). The immediate priorities are: 1. Prevention of eclamptic seizures: Administer intravenous Magnesium Sulfate. 2. Control of severe hypertension: Administer antihypertensives like IV labetalol or hydralazine to lower BP to a safer range (e.g., <160/110 mmHg). 3. Maternal and fetal assessment. 4. Planning for delivery, which is the definitive treatment. Administering MgSO<sub>4</sub> is a critical first step to prevent seizures.

Ethylene glycol, a common component of antifreeze, is metabolized to toxic acids, including glycolic acid and oxalic acid. This leads to a severe high anion gap metabolic acidosis and acute kidney injury, often characterized by the presence of calcium oxalate crystals (monohydrate or dihydrate) in the urine. Methanol poisoning also causes high anion gap metabolic acidosis and visual disturbances but typically not prominent oxalate crystalluria. Salicylates can cause a mixed respiratory alkalosis and metabolic acidosis.

Congenital hypothyroidism is most commonly caused by defects in thyroid gland development,

collectively termed thyroid dysgenesis. This accounts for about 80-85% of cases. Thyroid dysgenesis includes thyroid agenesis (complete absence of the thyroid gland), thyroid hypoplasia (underdeveloped gland), and ectopic thyroid gland (thyroid tissue located outside its normal position, often sublingual). Disorders of thyroid hormone synthesis (dyshormonogenesis) account for most of the remaining cases.

GMC 24

Vasa previa occurs when fetal blood vessels run across or near the internal cervical os, unprotected by placental tissue or Wharton's jelly. Rupture of membranes can tear these vessels, leading to acute fetal hemorrhage (vaginal bleeding) and subsequent severe fetal distress, such as bradycardia. The timing of bleeding immediately after ROM with acute fetal compromise is characteristic.

with ECV, transient fetal heart rate abnormalities, such as bradycardia or decelerations, are relatively common during or immediately after the procedure.

The symptoms of intense pruritus, particularly affecting the palms and soles, without a primary rash, in the third trimester of pregnancy are highly characteristic of intrahepatic cholestasis of pregnancy (ICP), also known as obstetric cholestasis. The diagnosis is confirmed by elevated serum total bile acid levels. Liver function tests (ALT, AST) may also be elevated.

Hypomagnesemia (magnesium deficiency) is a well-known cause of renal potassium wasting, leading to hypokalemia that can be refractory to potassium supplementation alone.

The adult female urethra is approximately how many centimeters long?

3-5 cm

Terminal hematuria, which is the appearance of blood predominantly at the end of urination, classically suggests a source of bleeding in the bladder neck, posterior urethra (including the prostate in males), or the trigone area of the bladder.

A patient with chronic alcoholism and malnutrition is admitted to the hospital. After starting total parenteral nutrition, he develops confusion, muscle weakness, and respiratory distress.

Laboratory tests reveal significantly low serum phosphate levels. This condition is known as:  
Refeeding syndrome

PPI + hypocalcemia symptoms = hypomagnesemia

Which of the following radiological investigations is generally considered the first-line imaging modality for evaluating kidney size, echotexture, and excluding hydronephrosis in a patient with suspected renal disease? RENAL ULTRASOUND

In a patient with severe hyponatremia who is symptomatic with seizures, what is the recommended initial rate of correction with hypertonic saline to avoid osmotic demyelination syndrome? Increase serum sodium by 4-6 mEq/L in the first 1-2 hours, then slow down correction

**Struvite stones are classically associated with chronic urinary tract infections caused by urease-producing bacteria.**

Large, painless, transilluminant scrotal swelling in adults = Hydrocele

A 40-year-old man is diagnosed with acute bacterial prostatitis. In addition to appropriate antibiotics, which of the following is an important component of symptomatic management?  
Alpha-blockers and NSAIDs

Classic **uremic symptoms**: nausea, vomiting, metallic taste, anorexia, fatigue, **confusion**, pruritus, pericarditis.

- **Hyperkalemia Key principle:**
  - **ECG normal, asymptomatic,  $K^+$  6.5–7.0**: conservative therapy with **potassium restriction + oral binding resin** and **close monitoring** is appropriate.
  - **ECG changes or  $K^+ \geq 7.0$** : escalate to **IV calcium, insulin-glucose, and/or dialysis**.

Following electrolyte abnormalities is a common cause of nephrogenic diabetes insipidus ;  
**HYPOKALEMIA**

Primary mechanism of action of thiazide diuretics in the nephron? Inhibition of the Na-Cl cotransporter in the distal convoluted tubule

A 28-year-old man presents with a painful, superficial ulcer on his penis with a ragged undermined edge and a friable base that bleeds easily. He also has tender, suppurative inguinal lymphadenopathy. What is the most likely diagnosis and causative organism? **CHANCROID**

Stage	GFR (mL/min/1.73 m <sup>2</sup> )	Label
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G1	≥90	Normal/high
G2	60–89	Mildly decreased
G3a	45–59	Mild–moderate decrease
G3b.	30–44	Moderate–severe decrease

G4	15–29	Severe decrease
G5	<15	Kidney failure

Crystal type	Shape	Key clues	
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<b>**Calcium oxalate**</b>	Envelope or dumbbell	Most common overall, radiopaque	
<b>**Uric acid**</b>	Rhomboid or rosettes	Radiolucent, acidic urine	
<b>**Cystine**</b>	<b>**Hexagonal**</b>	Rare, <b>**hereditary (autosomal</b>	
recessive)**			
<b>**Struvite**</b>	Coffin-lid	Associated with urease-producing	
infections			
<b>**Calcium phosphate*</b>	Rosette	Alkaline urine	

Child + DI + exophthalmos + punched-out skull lesions = Langerhans Cell Histiocytosis.

### Congenital diaphragmatic hernia

- Antenatal diagnosis common
- Newborns often electively intubated at birth
- Surgery delayed 24–48 hours after stabilization
- CXR shows bowel loops in thorax

In a cyanotic newborn:

- If oxygen saturation improves markedly with 100% (or 95%) oxygen → the problem is



## pulmonary

- If oxygen saturation does NOT improve → think cyanotic congenital heart disease or abnormal hemoglobin

## Rh incompatibility ✓✓

- Classic cause of severe jaundice within first 24 hours
- Worsens with subsequent pregnancies due to maternal sensitization
- Strong family history fits perfectly
- Causes severe hemolysis → early hyperbilirubinemia

The risk of developing neonatal jaundice is significantly increased with: **A** Prematurity

Deficiency of which B-vitamin is a rare but recognized cause of neonatal seizures that are responsive to supplementation with this vitamin? **A.** Pyridoxine

## Spastic diplegia ✓✓

- Classic long-term sequela of Periventricular leukomalacia (PVL) in preterm infants
- Lower limbs > upper limbs

The early phase of Acute Tubular Necrosis typically characterised by: **A.** Oliguria

What would be the most likely characteristic urinalysis findings in an 8-year-old child with acute post-streptococcal glomerulonephritis?

**A.** Presence of red blood cell casts, moderate proteinuria, and numerous RBCs per high power field

In nephrotic syndrome, what is the drug of choice for induction of remission, especially in minimal change disease? **A.** Prednisolone

### Minimal change nephropathy

- Most common cause of nephrotic syndrome in children (1–10 years old)
- Triggered by viral infections
- Presents with **edema, massive proteinuria, hypoalbuminemia**
- Usually **normal renal function**
- Past history of **atopy** supports this

A 7-year-old child presents with a **chronic cough** and is also found to be **jaundiced** on examination. What is the most likely diagnosis underlying both these findings?

E. Alpha-1 antitrypsin deficiency

which investigation would be most helpful in differentiating Growth Hormone Deficiency from Constitutional Delay of Growth and Puberty? GH stimulation tests

Diffuse toxic goiter is ?    A. Primarily due to abnormal thyroid-stimulating antibodies.

Fibrocystic disease of the breast has been associated with imbalances or relative elevations in blood levels of which hormone? ESTROGEN

### Intraductal papilloma

- Benign tumor within a duct
- Causes **spontaneous, unilateral, single-duct bloody discharge**
- Often **no palpable lump**
  
- **Single-duct discharge** → localized lesion → **microdochectomy**
- **Multiple-duct discharge** → diffuse ductal disease → **total duct excision**. [Hadfield's]

operation]

Among benign breast lesions, atypical hyperplasia carries the highest relative risk for future breast carcinoma.

clinical condition presenting with a sub areolar mass and nipple discharge of any color is most characteristic of: Mammary duct ectasia.

Following breast cancer conditions or types has a universally poor prognosis and is considered highly aggressive....Inflammatory breast carcinoma.

If biopsy confirms localized prostate cancer, what is a curative treatment option for a fit elderly patient? **A.** Radical prostatectomy or radiotherapy.

A history of double micturition is typical of which bladder condition? **A.** Large bladder diverticulum.

IN Transurethral Resection of the Prostate. Which electrolyte abnormality is a well-known potential complication during or shortly after this procedure due to absorption of irrigation fluid?

- **Hyponatremia** → most common
- **Hypervolemia / fluid overload** → can cause pulmonary edema
- **Other electrolytes:** potassium, calcium usually normal unless severe dilution occur

Following urinary tract stones are typically radiolucent on plain X-ray KUB?

Pure uric acid stones. Dihydroxyadenine stones. Xanthine stones

The appropriate management of renal cell carcinoma that extends as a tumor thrombus into the inferior vena cava, but without distant metastases, is generally: Radical nephrectomy with thrombectomy

- **DMSA scan** is the **most sensitive and useful test** for **detecting renal cortical scars** in children with VUR.
- **MCUG** is used to **diagnose reflux**, not scarring.

Hematuria that occurs at the beginning of the urinary stream typically indicates a lesion in the anterior urethra. Hematuria occurring throughout urination suggests a bladder or upper tract source. Terminal hematuria often points to the bladder neck or prostatic urethra. Given 'initial hematuria', a urethral source is most probable.

Juvenile polyps are often described as cherry-red, pedunculated lesions. They are hamartomatous polyps common in children and young adults, often presenting with painless rectal bleeding.

Rose's position involves placing the patient supine with the neck hyperextended, often by putting a sandbag or roll under the shoulders and allowing the head to drop back. This position provides optimal exposure of the anterior neck and is commonly used during thyroidectomy, parathyroidectomy, and tonsillectomy.

The 'double bubble' sign on ultrasound is characteristic of duodenal atresia. Duodenal atresia is strongly associated with Down syndrome, occurring in approximately 20–30% of infants with duodenal atresia.

Mesangiocapillary Glomerulonephritis Type II, also known as Dense Deposit Disease, is often associated with the presence of C3 nephritic factor and can be associated with partial lipodystrophy.

Furosemide, like many drugs, can cause an idiosyncratic hypersensitivity reaction leading to Acute Interstitial Nephritis. This results in inflammation of the renal interstitium and tubules. While prerenal azotemia from overdiuresis is also a risk with furosemide, AIN is a distinct immunologically mediated injury.

Familial Hypokalemic Periodic Paralysis is an autosomal dominant channelopathy characterized by recurrent episodes of flaccid muscle weakness or paralysis, often triggered by factors such as rest after strenuous exercise, high carbohydrate meals, stress, or cold exposure. These triggers cause a rapid shift of potassium from the extracellular to the intracellular space, leading to acute, severe hypokalemia and subsequent muscle paralysis. Serum potassium is very low during attacks but normal between attacks.