

(A Unit of KOS Healthcare)



Dr. Vinay Chopra MD (Pathology & Microbiology) Chairman & Consultant Pathologist

Dr. Yugam Chopra MD (Pathology) CEO & Consultant Pathologist

NAME : Mrs. KAMLESH SHARMA

AGE/ GENDER : 76 YRS/FEMALE **PATIENT ID** : 1662348

COLLECTED BY : SURJESH REG. NO./LAB NO. :012411050082

REFERRED BY **REGISTRATION DATE** : 05/Nov/2024 05:19 PM BARCODE NO. :01520178 **COLLECTION DATE** : 05/Nov/2024 05:42PM CLIENT CODE. : KOS DIAGNOSTIC LAB REPORTING DATE : 05/Nov/2024 08:01PM

CLIENT ADDRESS : 6349/1, NICHOLSON ROAD, AMBALA CANTT

Value Unit **Biological Reference interval Test Name**

CLINICAL CHEMISTRY/BIOCHEMISTRY GLUCOSE RANDOM (R)

GLUCOSE RANDOM (R): PLASMA NORMAL: < 140.00 204.83^H mg/dL

by GLUCOSE OXIDASE - PEROXIDASE (GOD-POD) PREDIABETIC: 140.0 - 200.0

DIABETIC: > 0R = 200.0

IN ACCORDANCE WITH AMERICAN DIABETES ASSOCIATION GUIDELINES:

1. A random plasma glucose level below 140 mg/dl is considered normal.

2. A random glucose level between 140 - 200 mg/dl is considered as glucose intolerant or prediabetic. A fasting and post-prinadial blood test (after consumption of 75 gms of glucose) is recommended for all such patients.

3. A random glucose level of above 200 mg/dl is highly suggestive of diabetic state. A repeat post-prandial is strongly recommended for all such patients. A fasting plasma glucose level in excess of 125 mg/dl on both occasions is confirmatory for diabetic state.



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DR.YUGAM CHOPRA CONSULTANT PATHOLOGIST





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Test Name	Value	Unit	Biological Reference interval
	ELECTRAL VIEC CAMP	LETE DDOELLE	

ELECTROLYTES COMPLETE PROFILE

SODIUM: SERUM	140.9	mmol/L	135.0 - 150.0
by ISE (ION SELECTIVE ELECTRODE)			
POTASSIUM: SERUM by ISE (ION SELECTIVE ELECTRODE)	5.01 ^H	mmol/L	3.50 - 5.00
CHLORIDE: SERUM by ISE (ION SELECTIVE ELECTRODE)	105.68	mmol/L	90.0 - 110.0

INTERPRETATION:-

SODIUM:-

Sodium is the major cation of extra-cellular fluid. Its primary function in the body is to chemically maintain osmotic pressure & acid base balance & to transmit nerve impulse.

HYPONATREMIA (LOW SODIUM LEVEL) CAUSES:-

- 1. Low sodium intake.
- 2. Sodium loss due to diarrhea & vomiting with adequate water and iadequate salt replacement.
- 3. Diuretics abuses.
- 4. Salt loosing nephropathy.
- 5. Metabolic acidosis.
- 6. Adrenocortical issuficiency.
- 7. Hepatic failure.

HYPERNATREMIA (INCREASED SODIUM LEVEL) CAUSES:-

- 1. Hyperapnea (Prolonged)
- 2. Diabetes insipidus
- 3. Diabetic acidosis
- 4. Cushings syndrome
- 5.Dehydration

POTASSIUM:-

Potassium is the major cation in the intracellular fluid. 90% of potassium is concentrated within the cells. When cells are damaged, potassium is released in the blood.

HYPOKALEMIA (LOW POTASSIUM LEVELS):-

- 1. Diarrhoea, vomiting & malabsorption.
- 2. Severe Burns.
- 3.Increased Secretions of Aldosterone

HYPERKALEMIA (INCREASED POTASSIUM LEVELS):-

- 1.Oliguria
- 2. Renal failure or Shock
- 3. Respiratory acidosis



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Test Name Value Unit Biological Reference interval

4. Hemolysis of blood



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Test Name Value Unit Biological Reference interval

VITAMINS

VITAMIN B12/COBALAMIN

VITAMIN B12/COBALAMIN: SERUM $> 2000^{\text{H}}$ pg/mL 190.0 - 890.0

by CMIA (CHEMILUMINESCENT MICROPARTICLE IMMUNOASSAY)

INTERPRETATION:-

INCREASED VITAMIN B12	DECREASED VITAMIN B12		
1.Ingestion of Vitamin C	1.Pregnancy		
2.Ingestion of Estrogen	2.DRUGS:Aspirin, Anti-convulsants, Colchicine		
3.Ingestion of Vitamin A	3.Ethanol Igestion		
4.Hepatocellular injury	4. Contraceptive Harmones		
5.Myeloproliferative disorder	5.Haemodialysis		
6.Uremia	6. Multiple Myeloma		

- 1. Vitamin B12 (cobalamin) is necessary for hematopoiesis and normal neuronal function.
- 2.In humans, it is obtained only from animal proteins and requires intrinsic factor (IF) for absorption.
- 3. The body uses its vitamin B12 stores very economically, reabsorbing vitamin B12 from the ileum and returning it to the liver; very little is excreted.
- 4.Vitamin B12 deficiency may be due to lack of IF secretion by gastric mucosa (eg. gastrectomy, gastric atrophy) or intestinal malabsorption (eg, ileal resection, small intestinal diseases).
- 5.Vitamin B12 deficiency frequently causes macrocytic anemia, glossitis, peripheral neuropathy, weakness, hyperreflexia, ataxia, loss of proprioception, poor coordination, and affective behavioral changes. These manifestations may occur in any combination; many patients have the neurologic defects without macrocytic anemia.
- 6. Serum methylmalonic acid and homocysteine levels are also elevated in vitamin B12 deficiency states.
- 7.Follow-up testing for antibodies to intrinsic factor (IF) is recommended to identify this potential cause of vitamin B12 malabsorption.

 NOTE:A normal serum concentration of vitamin B12 does not rule out tissue deficiency of vitamin B12. The most sensitive test for vitamin B12 deficiency at the cellular level is the assay for MMA. If clinical symptoms suggest deficiency, measurement of MMA and homocysteine should be considered, even if serum vitamin B12 concentrations are normal.



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Test Name Value Unit Biological Reference interval

CLINICAL PATHOLOGY URINE ROUTINE & MICROSCOPIC EXAMINATION

PHYSICAL EXAMINATION

QUANTITY RECIEVED 10 ml

COLOUR AMBER YELLOW PALE YELLOW

by DIP STICK/REFLECTANCE SPECTROPHOTOMETRY

TRANSPARANCY HAZY CLEAR by DIP STICK/REFLECTANCE SPECTROPHOTOMETRY

SPECIFIC GRAVITY 1.01 1.002 - 1.030

by DIP STICK/REFLECTANCE SPECTROPHOTOMETRY

CHEMICAL EXAMINATION

REACTION ACIDIC by DIP STICK/REFLECTANCE SPECTROPHOTOMETRY

PROTEIN Negative NEGATIVE (-ve)

by DIP STICK/REFLECTANCE SPECTROPHOTOMETRY

SUGAR 2+ NEGATIVE (-ve)
by DIP STICK/REFLECTANCE SPECTROPHOTOMETRY

pH <=5.0 5.0 - 7.5

by DIP STICK/REFLECTANCE SPECTROPHOTOMETRY

BILIRUBIN

Negative

NEGATIVE (-ve)

by DIP STICK/REFLECTANCE SPECTROPHOTOMETRY

NITRITE Negative NEGATIVE (-ve)

UROBILINOGEN Normal EU/dL 0.2 - 1.0

KETONE BODIES Negative NEGATIVE (-ve)

by DIP STICK/REFLECTANCE SPECTROPHOTOMETRY

BLOOD Negative NEGATIVE (-ve)

ASCORBIC ACID NEGATIVE (-ve) NEGATIVE (-ve)

by DIP STICK/REFLECTANCE SPECTROPHOTOMETRY

MICROSCOPIC EXAMINATION

by DIP STICK/REFLECTANCE SPECTROPHOTOMETRY.

by DIP STICK/REFLECTANCE SPECTROPHOTOMETRY

RED BLOOD CELLS (RBCs) NEGATIVE (-ve) /HPF 0 - 3 by MICROSCOPY ON CENTRIFUGED URINARY SEDIMENT

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Test Name	Value	Unit	Biological Reference interval
PUS CELLS by MICROSCOPY ON CENTRIFUGED URINARY SEDIMENT	2-3	/HPF	0 - 5
EPITHELIAL CELLS by MICROSCOPY ON CENTRIFUGED URINARY SEDIMENT	3-4	/HPF	ABSENT
CRYSTALS by MICROSCOPY ON CENTRIFUGED URINARY SEDIMENT	NEGATIVE (-ve)		NEGATIVE (-ve)
CASTS by MICROSCOPY ON CENTRIFUGED URINARY SEDIMENT	NEGATIVE (-ve)		NEGATIVE (-ve)
BACTERIA by MICROSCOPY ON CENTRIFUGED URINARY SEDIMENT	NEGATIVE (-ve)		NEGATIVE (-ve)
OTHERS by MICROSCOPY ON CENTRIFUGED URINARY SEDIMENT	NEGATIVE (-ve)		NEGATIVE (-ve)
TRICHOMONAS VAGINALIS (PROTOZOA) by MICROSCOPY ON CENTRIFUGED URINARY SEDIMENT	ABSENT		ABSENT



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CLIENT ADDRESS : 6349/1, NICHOLSON ROAD, AMBALA CANTT

Value Unit **Biological Reference interval Test Name**

MICROBIOLOGY

CULTURE AEROBIC BACTERIA AND ANTIBIOTIC SENSITIVITY (CONVENTIONAL): BLOOD

BLOOD CULTURE AND SUSCEPTIBILITY

DATE OF SAMPLE 05-11-2024 SPECIMEN SOURCE BLOOD

INCUBATION PERIOD 72 HOURS (3 SUBCULTURES)

CULTURE

by AUTOMATED BROTH CULTURE

NO AEROBIC PYOGENIC ORGANISM GROWN AFTER 72 HOURS OF **ORGANISM** by AUTOMATED BROTH CULTURE

INCUBATION AT 37*C

AEROBIC SUSCEPTIBILITY BLOOD

- 1. A test interpreted as **SENSTITIVE** implies that infection due to isolate may be appropriately treated with the dosage of an antimicrobial agent recommended for that type of infection and infecting species, unless otherwise indicated.

 2. A test interpreted as **INTERMEDIATE** implies that the "Infection due to the isolate may be appropriately treated in body sites where the drugs are
- physiologically concentrated or when a high dosage of drug can be used".

 3.A test interpreted as **RESISTANT** implies that the "isolates are not inhibited by the usually achievable concentration of the agents with normal
- dosage, schedule and/or fall in the range where specific microbial resistance mechanism are likely (e.g. beta-lactamases), and clinical efficacy has not been reliable in treatment studies

- Conditions which can cause a false Negative culture: 1. Patient is on antibiotics. Please repeat culture post therapy.
- 2. Anaerobic bacterial infection.
- 3. Fastidious aerobic bacteria which are not able to grow on routine culture media.
- 4. Besides all these factors, at least in 25-40 % of cases there is no direct correlation between in vivo clinical picture.
- 5. Renal tuberculosis to be confirmed by AFB studies.



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Test Name Value Unit Biological Reference interval

SPECIAL INVESTIGATIONS

PROTEIN ELECTROPHORESIS: SERUM

TOTAL PROTEINS: SERUM by MIGRATION GEL ELECTROPHORESIS	7.35	gm/dL	6.20 - 8.00
ALBUMIN: SERUM by MIGRATION GEL ELECTROPHORESIS	3.72	gm/dL	3.50 - 5.50
A : G RATIO: SERUM by MIGRATION GEL ELECTROPHORESIS	1.02	RATIO	1.00 - 2.00
ALPHA 1 GLOBULIN by MIGRATION GEL ELECTROPHORESIS	0.36	gm/dL	0.11 - 0.40
ALPHA 2 GLOBULIN by MIGRATION GEL ELECTROPHORESIS	0.9	gm/dL	0.43 - 1.03
BETA GLOBULIN by MIGRATION GEL ELECTROPHORESIS	0.92	mg/dL	0.53 - 1.40
GAMMA GLOBULIN by MIGRATION GEL ELECTROPHORESIS	1.45	gm/dL	0.75 - 1.80

INTERPRETATION

ADVICE

Protein electrophoresis shows normal pattern. No M band seen.

KINDLY CORRELATE CLINICALLY

INTERPRETATION:

- 1. Serum protein electrophoresis is commonly used to identify patients with multiple myeloma and disorders of serum proteins.
- 2. Electrophoresis is a method of separating proteins based on their physical properties. the pattern of serum protein electrophoresis results depends on the frations of 2 types of protein: albumin and globulin (alpha 1 alpha 2, beta and gamma.)
- 3.A homogeneous spike-like peak in a focal region of the gamma-globulin zone indicates a monoclonal gammopathy.
- 4.Monoclonal gammopathies are associated with a clonal process that is malignant or potentially malignant, including multiple myeloma, Waldenstrom macroglobulinemia, solitary plasmacytoma, smoldering multiple myeloma, monoclonal gammopathy of undetermined significance, plasma cell leukemia, heavy chain disease, and amyloidosis.
- 5.M-protein (in the gamma region) level greater than 3 g/dL should be interpreted along with other radiologic and haematological findings to arrive at a diagnosis of Multiple myeloma and must not be considered in isolation.
- 6.Occasionally M protein may appear as a narrow spike in the beta or alpha2 regions also.
- 7. Up to one fifth of patients with Myeloma may have an M-protein spike of less than 1 g /dL.
- 8.Hypogammaglobulinemia on serum protein electrophoresis occurs in about 10% of patients with multiple myeloma who do not have a serum M-protein spike.
- 9. Most of these patients have a large amount of Bence Jones protein (monoclonal free kappa or lambda chain) in their urine, wherein urine protein electrophoresis should be performed. Monoclonal gammopathy is present in up to 8 percent of healthy geriatric patients.



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The following conditions require serum immunofixation to confirm monoclonality or to differentiate monoclonal and polyclonal disoders.

1.A well defined "M" band.

2.Faint band

3.Chronic inflammatory pattern (decreased albumin, increased alpha, increased gamma fractions)

4. Isolated increase in any region with an otherwise normal pattern.

5. Shouldering of albumin peak along anodal or cathodal side may be seen with lipoproteins, drugs, bilirubin or radiological contrast.

** End Of Report ***



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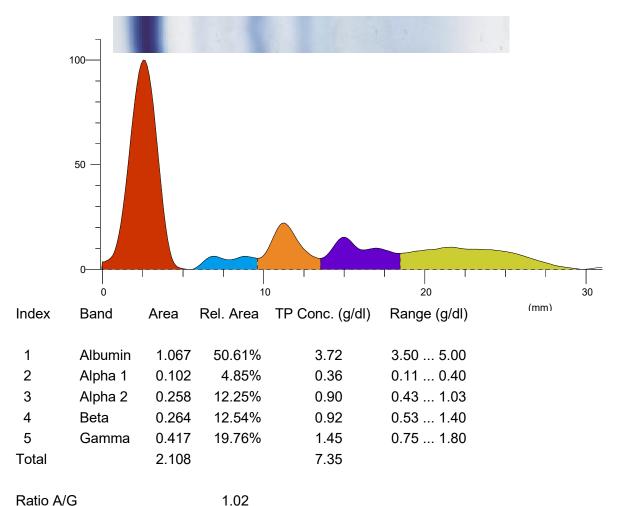


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PROTEIN ELECTROPHORESIS





Comment:-

Protein electrophoresis shows normal pattern. No M band seen. Kindly correlate clinically.