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

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

NAME	**: Mr. V.N. SHARMA**		
AGE/ GENDER	: 78 YRS/MALE	**PATIENT ID**	: 1704078
COLLECTED BY	: SURJESH	**REG. NO./LAB NO.**	**: 012412200016**
REFERRED BY	:	**REGISTRATION DATE**	: 20/Dec/2024 10:21 AM
BARCODE NO.	: 01522712	**COLLECTION DATE**	: 20/Dec/2024 11:02AM
CLIENT CODE.	: KOS DIAGNOSTIC LAB	**REPORTING DATE**	: 20/Dec/2024 11:46AM
CLIENT ADDRESS	: 6349/1, NICHOLSON ROAD, AMBALA CANTT		

Test Name	Value	Unit	Biological Reference interval

HAEMATOLOGY

HAEMOGLOBIN (HB)

HAEMOGLOBIN (HB) *by CALORIMETRIC*	**11.6^{L}**	gm/dL	12.0 - 17.0

INTERPRETATION:-

Hemoglobin is the protein molecule in red blood cells that carries oxygen from the lungs to the bodys tissues and returns carbon dioxide from the tissues back to the lungs.
A low hemoglobin level is referred to as ANEMIA or low red blood count.

ANEMIA (DECRESED HAEMOGLOBIN):

1) Loss of blood (traumatic injury, surgery, bleeding, colon cancer or stomach ulcer)
2) Nutritional deficiency (iron, vitamin B12, folate)
3) Bone marrow problems (replacement of bone marrow by cancer)
4) Suppression by red blood cell synthesis by chemotherapy drugs
5) Kidney failure
6) Abnormal hemoglobin structure (sickle cell anemia or thalassemia).

POLYCYTHEMIA (INCREASED HAEMOGLOBIN):

1) People in higher altitudes (Physiological)
2) Smoking (Secondary Polycythemia)
3) Dehydration produces a falsely rise in hemoglobin due to increased haemoconcentration
4) Advanced lung disease (for example, emphysema)
5) Certain tumors
6) A disorder of the bone marrow known as polycythemia rubra vera,
7) Abuse of the drug erythropoetin (Epogen) by athletes for blood doping purposes (increasing the amount of oxygen available to the body by chemically raising the production of red blood cells).

NOTE: TEST CONDUCTED ON EDTA WHOLE BLOOD

DR.VINAY CHOPRA
CONSULTANT PATHOLOGIST
MBBS, MD (PATHOLOGY & MICROBIOLOGY)

DR.YUGAM CHOPRA
CONSULTANT PATHOLOGIST
MBBS , MD (PATHOLOGY)

NAME	**: Mr. V.N. SHARMA**		
AGE/ GENDER	: 78 YRS/MALE	**PATIENT ID**	: 1704078
COLLECTED BY	: SURJESH	**REG. NO./LAB NO.**	**: 012412200016**
REFERRED BY	:	**REGISTRATION DATE**	: 20/Dec/2024 10:21 AM
BARCODE NO.	: 01522712	**COLLECTION DATE**	: 20/Dec/2024 11:02AM
CLIENT CODE.	: KOS DIAGNOSTIC LAB	**REPORTING DATE**	: 20/Dec/2024 12:13PM
CLIENT ADDRESS	: 6349/1, NICHOLSON ROAD, AMBALA CANTT		

Test Name	Value	Unit	Biological Reference interval

CLINICAL CHEMISTRY/BIOCHEMISTRY

GLUCOSE RANDOM (R)

GLUCOSE RANDOM (R): PLASMA *by GLUCOSE OXIDASE - PEROXIDASE (GOD-POD)*	82.28	mg/dL	NORMAL: < 140.00 PREDIABETIC: 140.0 - 200.0 DIABETIC: > 0R = 200.0

INTERPRETATION

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-prnadial 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.

DR.VINAY CHOPRA
CONSULTANT PATHOLOGIST
MBBS, MD (PATHOLOGY & MICROBIOLOGY)

DR.YUGAM CHOPRA
CONSULTANT PATHOLOGIST
MBBS , MD (PATHOLOGY)

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

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

NAME	**: Mr. V.N. SHARMA**		
AGE/ GENDER	: 78 YRS/MALE	**PATIENT ID**	: 1704078
COLLECTED BY	: SURJESH	**REG. NO./LAB NO.**	**: 012412200016**
REFERRED BY	:	**REGISTRATION DATE**	: 20/Dec/2024 10:21 AM
BARCODE NO.	: 01522712	**COLLECTION DATE**	: 20/Dec/2024 11:02AM
CLIENT CODE.	: KOS DIAGNOSTIC LAB	**REPORTING DATE**	: 20/Dec/2024 01:23PM
CLIENT ADDRESS	: 6349/1, NICHOLSON ROAD, AMBALA CANTT		

Test Name	Value	Unit	Biological Reference interval
CREATININE			
CREATININE: SERUM *by ENZYMATIC, SPECTROPHOTOMETRY*	**5.23^{H}**	mg/dL	0.40 - 1.40

DR.VINAY CHOPRA
CONSULTANT PATHOLOGIST
MBBS, MD (PATHOLOGY & MICROBIOLOGY)

DR.YUGAM CHOPRA
CONSULTANT PATHOLOGIST
MBBS , MD (PATHOLOGY)

NAME	**: Mr. V.N. SHARMA**		
AGE/ GENDER	: 78 YRS/MALE	**PATIENT ID**	: 1704078
COLLECTED BY	: SURJESH	**REG. NO./LAB NO.**	**: 012412200016**
REFERRED BY	:	**REGISTRATION DATE**	: 20/Dec/2024 10:21 AM
BARCODE NO.	: 01522712	**COLLECTION DATE**	: 20/Dec/2024 11:02AM
CLIENT CODE.	: KOS DIAGNOSTIC LAB	**REPORTING DATE**	: 20/Dec/2024 12:27PM
CLIENT ADDRESS	: 6349/1, NICHOLSON ROAD, AMBALA CANTT		

Test Name	Value	Unit	Biological Reference interval

CALCIUM

CALCIUM: SERUM *by ARSENAZO III, SPECTROPHOTOMETRY*	8.6	mg/dL	8.50 - 10.60

INTERPRETATION:-

1.Serum calcium (total) estimation is used for the diagnosis and monitoring of a wide range of disorders including diseases of bone, kidney, parathyroid gland, or gastrointestinal tract.
2. Calcium levels may also reflect abnormal vitamin D or protein levels.
3.The calcium content of an adult is somewhat over 1 kg (about 2% of the body weight).Of this, 99% is present as calcium hydroxyapatite in bones and <1% is present in the extra-osseous intracellular space or extracellular space (ECS).
4. In serum, calcium is bound to a considerable extent to proteins (approximately 40%), 10% is in the form of inorganic complexes, and 50% is present as free or ionized calcium.
NOTE:-Calcium ions affect the contractility of the heart and the skeletal musculature, and are essential for the function of the nervous system. In addition, calcium ions play an important role in blood clotting and bone mineralization.

HYPOCALCEMIA (LOW CALCIUM LEVELS) CAUSES :-

1.Due to the absence or impaired function of the parathyroid glands or impaired vitamin-D synthesis.
2. Chronic renal failure is also frequently associated with hypocalcemia due to decreased vitamin-D synthesis as well as hyperphosphatemia and skeletal resistance to the action of parathyroid hormone (PTH).
3.***NOTE:-*** A characteristic symptom of hypocalcemia is latent or manifest tetany and osteomalacia.

HYPERCALCEMIA (INCREASE CALCIUM LEVELS) CAUSES:-

1.Increased mobilization of calcium from the skeletal system or increased intestinal absorption.
2.Primary hyperparathyroidism (pHPT)
3.Bone metastasis of carcinoma of the breast, prostate, thyroid gland, or lung.
NOTE:-Severe hypercalcemia may result in cardiac arrhythmia.

DR.VINAY CHOPRA
CONSULTANT PATHOLOGIST
MBBS, MD (PATHOLOGY & MICROBIOLOGY)

DR.YUGAM CHOPRA
CONSULTANT PATHOLOGIST
MBBS , MD (PATHOLOGY)

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

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

NAME	**: Mr. V.N. SHARMA**		
AGE/ GENDER	: 78 YRS/MALE	**PATIENT ID**	: 1704078
COLLECTED BY	: SURJESH	**REG. NO./LAB NO.**	**: 012412200016**
REFERRED BY	:	**REGISTRATION DATE**	: 20/Dec/2024 10:21 AM
BARCODE NO.	: 01522712	**COLLECTION DATE**	: 20/Dec/2024 11:02AM
CLIENT CODE.	: KOS DIAGNOSTIC LAB	**REPORTING DATE**	: 20/Dec/2024 12:27PM
CLIENT ADDRESS	: 6349/1, NICHOLSON ROAD, AMBALA CANTT		

Test Name	Value	Unit	Biological Reference interval

PHOSPHOROUS

PHOSPHOROUS: SERUM *by PHOSPHOMOLYBDATE, SPECTROPHOTOMETRY*	**4.84^{H}**	mg/dL	2.5 - 4.5

INTERPREATION:-

1.Eighty-eight percent of the phosphorus contained in the body is localized in bone in the form of hydroxyapatite. The remainder is involved in intermediary carbohydrate metabolism and in physiologically important substances such as phospholipids, nucleic acids, and adenosine triphosphate (ATP).
2.Phosphorus occurs in blood in the form of inorganic phosphate and organically bound phosphoric acid. The small amount of extracellular organic phosphorus is found exclusively in the form of phospholipids.
3.Serum phosphate concentrations are dependent on meals and variation in the secretion of hormones such as parathyroid hormone (PTH) and may vary widely.

DECREASED (HYPOPHOSPHATEMIA):-

1.Shift of phosphate from extracellular to intracellular.
2.Renal phosphate wasting.
3.Loss from the gastrointestinal tract.
4.Loss from intracellular stores.

INCREASED (HYPERPHOPHATEMIA):-

1.Inability of the kidneys to excrete phosphate.
2.Increased intake or a shift of phosphate from the tissues into the extracellular fluid.

SIGNIFICANCE:-

1.Phosphate levels may be used in the diagnosis and management of a variety of disorders including bone, parathyroid and renal disease.
2.Hypophosphatemia is relatively common in hospitalized patients. Levels less than 1.5 mg/dL may result in muscle weakness, hemolysis of red cells, coma, and bone deformity and impaired bone growth.
3.The most acute problem associated with rapid elevations of serum phosphate levels is hypocalcemia with tetany, seizures, and hypotension. Soft tissue calcification is also an important long-term effect of high phosphorus levels.
4.Phosphorus levels less than 1.0 mg/dL are potentially life-threatening and are considered a critical value.

NOTE: Phosphorus has a very strong biphasic circadian rhythm. Values are lowest in the morning, peak first in the late afternoon and peak again in the late evening. The second peak is quite elevated and results may be outside the reference range

DR.VINAY CHOPRA
CONSULTANT PATHOLOGIST
MBBS, MD (PATHOLOGY & MICROBIOLOGY)

DR.YUGAM CHOPRA
CONSULTANT PATHOLOGIST
MBBS , MD (PATHOLOGY)

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

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

NAME	**: Mr. V.N. SHARMA**		
AGE/ GENDER	: 78 YRS/MALE	**PATIENT ID**	: 1704078
COLLECTED BY	: SURJESH	**REG. NO./LAB NO.**	**: 012412200016**
REFERRED BY	:	**REGISTRATION DATE**	: 20/Dec/2024 10:21 AM
BARCODE NO.	: 01522712	**COLLECTION DATE**	: 20/Dec/2024 11:02AM
CLIENT CODE.	: KOS DIAGNOSTIC LAB	**REPORTING DATE**	: 20/Dec/2024 12:27PM
CLIENT ADDRESS	: 6349/1, NICHOLSON ROAD, AMBALA CANTT		

Test Name	Value	Unit	Biological Reference interval
ELECTROLYTES COMPLETE PROFILE			
SODIUM: SERUM *by ISE (ION SELECTIVE ELECTRODE)*	146.6	mmol/L	135.0 - 150.0
POTASSIUM: SERUM *by ISE (ION SELECTIVE ELECTRODE)*	**5.06^{H}**	mmol/L	3.50 - 5.00
CHLORIDE: SERUM *by ISE (ION SELECTIVE ELECTRODE)*	109.95	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

DR.VINAY CHOPRA
CONSULTANT PATHOLOGIST
MBBS, MD (PATHOLOGY & MICROBIOLOGY)

DR.YUGAM CHOPRA
CONSULTANT PATHOLOGIST
MBBS , MD (PATHOLOGY)

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

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

NAME	**: Mr. V.N. SHARMA**		
AGE/ GENDER	: 78 YRS/MALE	**PATIENT ID**	: 1704078
COLLECTED BY	: SURJESH	**REG. NO./LAB NO.**	**: 012412200016**
REFERRED BY	:	**REGISTRATION DATE**	: 20/Dec/2024 10:21 AM
BARCODE NO.	: 01522712	**COLLECTION DATE**	: 20/Dec/2024 11:02AM
CLIENT CODE.	: KOS DIAGNOSTIC LAB	**REPORTING DATE**	: 20/Dec/2024 12:27PM
CLIENT ADDRESS	: 6349/1, NICHOLSON ROAD, AMBALA CANTT		

Test Name	Value	Unit	Biological Reference interval
4.Hemolysis of blood			

*** End Of Report ***

DR.VINAY CHOPRA
CONSULTANT PATHOLOGIST
MBBS, MD (PATHOLOGY & MICROBIOLOGY)

DR.YUGAM CHOPRA
CONSULTANT PATHOLOGIST
MBBS , MD (PATHOLOGY)