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Dr. Yugam Chopra  
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NAME : Mrs. AMAR SHARDA  
AGE/ GENDER : 81 YRS/FEMALE  
COLLECTED BY : SURJESH  
REFERRED BY : CENTRAL PHOENIX CLUB (AMBALA CANTT)  
BARCODE NO. : 01515042  
CLIENT CODE. : KOS DIAGNOSTIC LAB  
CLIENT ADDRESS : 6349/1, NICHOLSON ROAD, AMBALA CANTT  
PATIENT ID : 1580127  
REG. NO./LAB NO. : 012408140012  
REGISTRATION DATE : 14/Aug/2024 09:39 AM  
COLLECTION DATE : 14/Aug/2024 10:11AM  
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Test Name	Value	Unit	Biological Reference interval
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## HAEMATOLOGY

### COMPLETE BLOOD COUNT (CBC)

#### RED BLOOD CELLS (RBCS) COUNT AND INDICES

HAEMOGLOBIN (HB) by CALORIMETRIC	10 <sup>L</sup>	gm/dL	12.0 - 16.0
RED BLOOD CELL (RBC) COUNT by HYDRO DYNAMIC FOCUSING, ELECTRICAL IMPEDENCE	3.14 <sup>L</sup>	Millions/cmm	3.50 - 5.00
PACKED CELL VOLUME (PCV) by CALCULATED BY AUTOMATED HEMATOLOGY ANALYZER	29.9 <sup>L</sup>	%	37.0 - 50.0
MEAN CORPUSCULAR VOLUME (MCV) by CALCULATED BY AUTOMATED HEMATOLOGY ANALYZER	95.1	fL	80.0 - 100.0
MEAN CORPUSCULAR HAEMOGLOBIN (MCH) by CALCULATED BY AUTOMATED HEMATOLOGY ANALYZER	31	pg	27.0 - 34.0
MEAN CORPUSCULAR HEMOGLOBIN CONC. (MCHC) by CALCULATED BY AUTOMATED HEMATOLOGY ANALYZER	32.6	g/dL	32.0 - 36.0
RED CELL DISTRIBUTION WIDTH (RDW-CV) by CALCULATED BY AUTOMATED HEMATOLOGY ANALYZER	15.6	%	11.00 - 16.00
RED CELL DISTRIBUTION WIDTH (RDW-SD) by CALCULATED BY AUTOMATED HEMATOLOGY ANALYZER	55.1	fL	35.0 - 56.0
MENTZERS INDEX by CALCULATED	30.29	RATIO	BETA THALASSEMIA TRAIT: < 13.0 IRON DEFICIENCY ANEMIA: >13.0
GREEN & KING INDEX by CALCULATED	45.99	RATIO	BETA THALASSEMIA TRAIT: < = 65.0 IRON DEFICIENCY ANEMIA: > 65.0

#### WHITE BLOOD CELLS (WBCS)

TOTAL LEUCOCYTE COUNT (TLC) by FLOW CYTOMETRY BY SF CUBE & MICROSCOPY	23270 <sup>H</sup>	/cmm	4000 - 11000
NUCLEATED RED BLOOD CELLS (nRBCS) by CALCULATED BY AUTOMATED HEMATOLOGY ANALYZER & MICROSCOPY	NIL		0.00 - 20.00
NUCLEATED RED BLOOD CELLS (nRBCS) % by CALCULATED BY AUTOMATED HEMATOLOGY ANALYZER & MICROSCOPY	NIL	%	< 10 %

#### DIFFERENTIAL LEUCOCYTE COUNT (DLC)



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<b>NEUTROPHILS</b> <i>by FLOW CYTOMETRY BY SF CUBE &amp; MICROSCOPY</i>	92 <sup>H</sup>	%	50 - 70
<b>LYMPHOCYTES</b> <i>by FLOW CYTOMETRY BY SF CUBE &amp; MICROSCOPY</i>	6 <sup>L</sup>	%	20 - 40
<b>EOSINOPHILS</b> <i>by FLOW CYTOMETRY BY SF CUBE &amp; MICROSCOPY</i>	0 <sup>L</sup>	%	1 - 6
<b>MONOCYTES</b> <i>by FLOW CYTOMETRY BY SF CUBE &amp; MICROSCOPY</i>	2	%	2 - 12
<b>BASOPHILS</b> <i>by FLOW CYTOMETRY BY SF CUBE &amp; MICROSCOPY</i>	0	%	0 - 1
<b><u>ABSOLUTE LEUKOCYTES (WBC) COUNT</u></b>			
<b>ABSOLUTE NEUTROPHIL COUNT</b> <i>by FLOW CYTOMETRY BY SF CUBE &amp; MICROSCOPY</i>	21408 <sup>H</sup>	/cmm	2000 - 7500
<b>ABSOLUTE LYMPHOCYTE COUNT</b> <i>by FLOW CYTOMETRY BY SF CUBE &amp; MICROSCOPY</i>	1396	/cmm	800 - 4900
<b>ABSOLUTE EOSINOPHIL COUNT</b> <i>by FLOW CYTOMETRY BY SF CUBE &amp; MICROSCOPY</i>	0 <sup>L</sup>	/cmm	40 - 440
<b>ABSOLUTE MONOCYTE COUNT</b> <i>by FLOW CYTOMETRY BY SF CUBE &amp; MICROSCOPY</i>	465	/cmm	80 - 880
<b><u>PLATELETS AND OTHER PLATELET PREDICTIVE MARKERS.</u></b>			
<b>PLATELET COUNT (PLT)</b> <i>by HYDRO DYNAMIC FOCUSING, ELECTRICAL IMPEDENCE</i>	167000	/cmm	150000 - 450000
<b>PLATELETCRIT (PCT)</b> <i>by HYDRO DYNAMIC FOCUSING, ELECTRICAL IMPEDENCE</i>	0.18	%	0.10 - 0.36
<b>MEAN PLATELET VOLUME (MPV)</b> <i>by HYDRO DYNAMIC FOCUSING, ELECTRICAL IMPEDENCE</i>	11	fL	6.50 - 12.0
<b>PLATELET LARGE CELL COUNT (P-LCC)</b> <i>by HYDRO DYNAMIC FOCUSING, ELECTRICAL IMPEDENCE</i>	52000	/cmm	30000 - 90000
<b>PLATELET LARGE CELL RATIO (P-LCR)</b> <i>by HYDRO DYNAMIC FOCUSING, ELECTRICAL IMPEDENCE</i>	30.9	%	11.0 - 45.0
<b>PLATELET DISTRIBUTION WIDTH (PDW)</b> <i>by HYDRO DYNAMIC FOCUSING, ELECTRICAL IMPEDENCE</i>	16.8 <sup>H</sup>	%	15.0 - 17.0

**ADVICE**

NOTE: TEST CONDUCTED ON EDTA WHOLE BLOOD

RECHECKED.

**KINDLY CORRELATE CLINICALLY**



*(Signature of Dr. Vinay Chopra)*

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CLINICAL CHEMISTRY/BIOCHEMISTRY

CREATININE

CREATININE: SERUM by ENZYMATIC, SPECTROPHOTOMETRY	0.63	mg/dL	0.40 - 1.20
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#### ELECTROLYTES COMPLETE PROFILE

SODIUM: SERUM <i>by ISE (ION SELECTIVE ELECTRODE)</i>	137.1	mmol/L	135.0 - 150.0
POTASSIUM: SERUM <i>by ISE (ION SELECTIVE ELECTRODE)</i>	3.67	mmol/L	3.50 - 5.00
CHLORIDE: SERUM <i>by ISE (ION SELECTIVE ELECTRODE)</i>	102.82	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 inadequate salt replacement.
3. Diuretics abuses.
4. Salt losing nephropathy.
5. Metabolic acidosis.
6. Adrenocortical insufficiency .
7. Hepatic failure.

##### HYPERNATREMIA (INCREASED SODIUM LEVEL) CAUSES:-

1. Hyperapnea (Prolonged)
2. Diabetes insipidus
3. Diabetic acidosis
4. Cushing's 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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4.Hemolysis of blood



  
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**ENDOCRINOLOGY**  
**PROCALCITONIN (PCT)**

**PROCALCITONIN (PCT): SERUM**  
 by ELFA (ENZYMELINKED FLOUROSCENCE ASSAY)

1.03<sup>H</sup>      ng/mL      < 0.50

**INTERPRETATION:**

Procalcitonin, the prohormone of calcitonin is below limit of detection 500 pg/ml in healthy individuals. It rises in response to an inflammatory stimulus especially of bacterial origin. It does not rise significantly with viral or non inflammations.

PROCALCITONIN (VALUE IN ng/mL)	INFERENCE
< 0.50 ng/mL	Minor local bacterial infection is possible. Severe systemic infection (Sepsis) is not likely
0.50- < 2.0 ng/mL	Systemic infection is possible, but various conditions are known to induce PCT as well (see below). Suggest repeat after 6-24 hours for a definitive diagnosis
2.0 - < 10.0 ng/mL	Systemic infection (Sepsis) is likely, unless other causes are known
>=10.0 ng/mL	Important systemic inflammatory response, almost exclusively due to severe bacterial sepsis or septic shock

**PCT levels can be elevated in non infectious causes like:**

- 1.The first days after a major trauma, major surgical intervention, burns, treatment with OKT3 antibodies and other drugs stimulating the release of pro-inflammatory cytokines, small cell lung cancer, medullary C-cell carcinoma of thyroid.
- 2.Patients with prolonged or severe cardiogenic shock, prolonged severe organ perfusion anomalies.
- 3.Neonates < 48 hrs of life.
- 4.Patients with PCT values 2000 pg/mL should be closely monitored both clinically and by reassessing PCT within 6-24 hrs.





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### IMMUNOPATHOLOGY/SEROLOGY

#### C-REACTIVE PROTEIN (CRP)

<b>C-REACTIVE PROTEIN (CRP) QUANTITATIVE:</b>	171.95 <sup>H</sup>	mg/L	0.0 - 6.0
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SERUM

by NEPHLOMETRY

#### INTERPRETATION:

1. C-reactive protein (CRP) is one of the most sensitive acute-phase reactants for inflammation.
2. CRP levels can increase dramatically (100-fold or more) after severe trauma, bacterial infection, inflammation, surgery, or neoplastic proliferation.
3. CRP levels (Quantitative) has been used to assess activity of inflammatory disease, to detect infections after surgery, to detect transplant rejection, and to monitor these inflammatory processes.
4. As compared to ESR, CRP shows an earlier rise in inflammatory disorders which begins in 4-6 hrs, the intensity of the rise being higher than ESR and the recovery being earlier than ESR. Unlike ESR, CRP levels are not influenced by hematologic conditions like Anemia, Polycythemia etc.,
5. Elevated values are consistent with an acute inflammatory process.


#### NOTE:

1. Elevated C-reactive protein (CRP) values are nonspecific and should not be interpreted without a complete clinical history.
2. Oral contraceptives may increase CRP levels.

\*\*\* End Of Report \*\*\*



  
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