

(A Unit of KOS Healthcare)



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

NAME : Mrs. USHA GARG

**AGE/ GENDER** : 74 YRS/FEMALE **PATIENT ID** : 1643744

COLLECTED BY: SURJESH REG. NO./LAB NO. : 012410150033

 REFERRED BY
 : 15/Oct/2024 11:21 AM

 BARCODE NO.
 : 01518937
 COLLECTION DATE
 : 15/Oct/2024 11:27 AM

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 : KOS DIAGNOSTIC LAB
 REPORTING DATE
 : 15/Oct/2024 11:54 AM

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

Test Name Value Unit Biological Reference interval

# HAEMATOLOGY COMPLETE BLOOD COUNT (CBC)

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

HAEMOGLOBIN (HB) by CALORIMETRIC	10.5 <sup>L</sup>	gm/dL	12.0 - 16.0
RED BLOOD CELL (RBC) COUNT by HYDRO DYNAMIC FOCUSING, ELECTRICAL IMPEDENCE	4.27	Millions/cmm	3.50 - 5.00
PACKED CELL VOLUME (PCV) by CALCULATED BY AUTOMATED HEMATOLOGY ANALYZER	33.1 <sup>L</sup>	%	37.0 - 50.0
MEAN CORPUSCULAR VOLUME (MCV) by CALCULATED BY AUTOMATED HEMATOLOGY ANALYZER	77.7 <sup>L</sup>	fL	80.0 - 100.0
MEAN CORPUSCULAR HAEMOGLOBIN (MCH) by CALCULATED BY AUTOMATED HEMATOLOGY ANALYZER	24.5 <sup>L</sup>	pg	27.0 - 34.0
MEAN CORPUSCULAR HEMOGLOBIN CONC. (MCHC) by CALCULATED BY AUTOMATED HEMATOLOGY ANALYZER	31.6 <sup>L</sup>	g/dL	32.0 - 36.0
RED CELL DISTRIBUTION WIDTH (RDW-CV) by CALCULATED BY AUTOMATED HEMATOLOGY ANALYZER	13.9	%	11.00 - 16.00
RED CELL DISTRIBUTION WIDTH (RDW-SD) by CALCULATED BY AUTOMATED HEMATOLOGY ANALYZER	40.2	fL	35.0 - 56.0
MENTZERS INDEX by CALCULATED	18.2	RATIO	BETA THALASSEMIA TRAIT: < 13.0 IRON DEFICIENCY ANEMIA: >13.0
GREEN & KING INDEX by CALCULATED	25.2	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	4950	/cmm	4000 - 11000
NUCLEATED RED BLOOD CELLS (nRBCS) by automated 6 part hematology analyzer	NIL		0.00 - 20.00
NUCLEATED RED BLOOD CELLS (nRBCS) % by CALCULATED BY AUTOMATED HEMATOLOGY ANALYZER	NIL	%	< 10 %
DIFFERENTIAL LEUCOCYTE COUNT (DLC)			
NEUTROPHILS  by FLOW CYTOMETRY BY SF CUBE & MICROSCOPY	64	%	50 - 70



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YMPHOCYTES by FLOW CYTOMETRY BY SF CUBE & MICROSCOPY	23	%	20 - 40
OSINOPHILS by flow cytometry by sf cube & microscopy	6	%	1 - 6
MONOCYTES by FLOW CYTOMETRY BY SF CUBE & MICROSCOPY	7	%	2 - 12
ASOPHILS by flow cytometry by sf cube & microscopy ABSOLUTE LEUKOCYTES (WBC) COUNT	0	%	0 - 1
BSOLUTE NEUTROPHIL COUNT by FLOW CYTOMETRY BY SF CUBE & MICROSCOPY	3168	/cmm	2000 - 7500
BSOLUTE LYMPHOCYTE COUNT by FLOW CYTOMETRY BY SF CUBE & MICROSCOPY	1138	/cmm	800 - 4900
BSOLUTE EOSINOPHIL COUNT by FLOW CYTOMETRY BY SF CUBE & MICROSCOPY	297	/cmm	40 - 440
BSOLUTE MONOCYTE COUNT by FLOW CYTOMETRY BY SF CUBE & MICROSCOPY	346	/cmm	80 - 880
BSOLUTE BASOPHIL COUNT by FLOW CYTOMETRY BY SF CUBE & MICROSCOPY LATELETS AND OTHER PLATELET PREDICTIVE MARKER	0 <b>RS.</b>	/cmm	0 - 110
LATELET COUNT (PLT) by HYDRO DYNAMIC FOCUSING, ELECTRICAL IMPEDENCE	396000	/cmm	150000 - 450000
LATELETCRIT (PCT) by hydro dynamic focusing, electrical impedence	0.41 <sup>H</sup>	%	0.10 - 0.36
MEAN PLATELET VOLUME (MPV) by HYDRO DYNAMIC FOCUSING, ELECTRICAL IMPEDENCE	10	fL	6.50 - 12.0
PLATELET LARGE CELL COUNT (P-LCC) by hydro dynamic focusing, electrical impedence	108000 <sup>H</sup>	/cmm	30000 - 90000
LATELET LARGE CELL RATIO (P-LCR) by HYDRO DYNAMIC FOCUSING, ELECTRICAL IMPEDENCE	27.2	%	11.0 - 45.0
PLATELET DISTRIBUTION WIDTH (PDW)  by HYDRO DYNAMIC FOCUSING, ELECTRICAL IMPEDENCE NOTE: TEST CONDUCTED ON EDTA WHOLE BLOOD	15.7	%	15.0 - 17.0



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Value Unit **Biological Reference interval** Test Name

### ERYTHROCYTE SEDIMENTATION RATE (ESR)

**ERYTHROCYTE SEDIMENTATION RATE (ESR)** 

31H

mm/1st hr

0 - 20

: 15/Oct/2024 12:08PM

by RED CELL AGGREGATION BY CAPILLARY PHOTOMETRY

### INTERPRETATION:

- 1. ESR is a non-specific test because an elevated result often indicates the presence of inflammation associated with infection, cancer and auto-
- immune disease, but does not tell the health practitioner exactly where the inflammation is in the body or what is causing it.

  2. An ESR can be affected by other conditions besides inflammation. For this reason, the ESR is typically used in conjunction with other test such as C-reactive protein
- 3. This test may also be used to monitor disease activity and response to therapy in both of the above diseases as well as some others, such as systemic lupus erythematosus

#### CONDITION WITH LOW ESR

A low ESR can be seen with conditions that inhibit the normal sedimentation of red blood cells, such as a high red blood cell count (polycythaemia), significantly high white blood cell count (leucocytosis), and some protein abnormalities. Some changes in red cell shape (such as sickle cells in sickle cell anaemia) also lower the ESR.

NOTE:

- 1. ESR and C reactive protein (C-RP) are both markers of inflammation.
  2. Generally, ESR does not change as rapidly as does CRP, either at the start of inflammation or as it resolves.
  3. CRP is not affected by as many other factors as is ESR, making it a better marker of inflammation.
  4. If the ESR is elevated, it is typically a result of two types of proteins, globulins or fibrinogen.
  5. Women tend to have a higher ESR, and menstruation and pregnancy can cause temporary elevations.
  6. Drugs such as dextran, methyldopa, oral contraceptives, penicillamine procainamide, theophylline, and vitamin A can increase ESR, while services and quiping may decrease it. aspirin, cortisone, and quinine may decrease it



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# KOS Diagnostic Lab (A Unit of KOS Healthcare)



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### PERIPHERAL BLOOD SMEAR

### **TEST NAME:**

### PERIPHERAL BLOOD FILM/SMEAR (PBF)

### RED BLOOD CELLS (RBC'S):

Anisocytosis with micorcytosis..RBCs reveal mild hypochromia.No polychromatic cells or normoblasts present.

### WHITE BLOOD CELLS (WBC'S):

No immature leucocytes seen.

### PLATELETS:

Platelets are adequate.

### **HEMOPARASITES:**

NOT SEEN.

### **IMPRESSION:**

Mild micorcytic hypochromic picture.



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Test Name Value Unit Biological Reference interval

# CLINICAL CHEMISTRY/BIOCHEMISTRY LIVER FUNCTION TEST (COMPLETE)

BILIRUBIN TOTAL: SERUM  by DIAZOTIZATION, SPECTROPHOTOMETRY	0.31	mg/dL	INFANT: 0.20 - 8.00 ADULT: 0.00 - 1.20
BILIRUBIN DIRECT (CONJUGATED): SERUM by DIAZO MODIFIED, SPECTROPHOTOMETRY	0.12	mg/dL	0.00 - 0.40
BILIRUBIN INDIRECT (UNCONJUGATED): SERUM by CALCULATED, SPECTROPHOTOMETRY	0.19	mg/dL	0.10 - 1.00
SGOT/AST: SERUM by IFCC, WITHOUT PYRIDOXAL PHOSPHATE	18.8	U/L	7.00 - 45.00
SGPT/ALT: SERUM by IFCC, WITHOUT PYRIDOXAL PHOSPHATE	10.6	U/L	0.00 - 49.00
AST/ALT RATIO: SERUM by CALCULATED, SPECTROPHOTOMETRY	1.77	RATIO	0.00 - 46.00
ALKALINE PHOSPHATASE: SERUM  by Para nitrophenyl phosphatase by amino methyl propanol	70.49	U/L	40.0 - 130.0
GAMMA GLUTAMYL TRANSFERASE (GGT): SERUM by SZASZ, SPECTROPHTOMETRY	14.94	U/L	0.00 - 55.0
TOTAL PROTEINS: SERUM by BIURET, SPECTROPHOTOMETRY	6.19 <sup>L</sup>	gm/dL	6.20 - 8.00
ALBUMIN: SERUM  by BROMOCRESOL GREEN	3.83	gm/dL	3.50 - 5.50
GLOBULIN: SERUM by CALCULATED, SPECTROPHOTOMETRY	2.36	gm/dL	2.30 - 3.50
A : G RATIO: SERUM by CALCULATED, SPECTROPHOTOMETRY	1.62	RATIO	1.00 - 2.00

### **INTERPRETATION**

NOTE:- To be correlated in individuals having SGOT and SGPT values higher than Normal Referance Range.

**USE**:- Differential diagnosis of diseases of hepatobiliary system and pancreas.

### INCREASED:

DRUG HEPATOTOXICITY	> 2
ALCOHOLIC HEPATITIS	> 2 (Highly Suggestive)
CIRRHOSIS	1.4 - 2.0



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Test Name	Value	Unit	Biological Reference interval
INTRAHEPATIC CHOLESTATIS		> 1.5	
HEPATOCELLULAR CARCINOMA & CHRONIC HEPATITIS		> 1.3 (Slightly Increased)	
DEODEAGED			

REPORTING DATE

#### DECREASED:

CLIENT CODE.

- 1. Acute Hepatitis due to virus, drugs, toxins (with AST increased 3 to 10 times upper limit of normal)
- 2. Extra Hepatic cholestatis: 0.8 (normal or slightly decreased).

### PROGNOSTIC SIGNIFICANCE:

NORMAL	< 0.65
GOOD PROGNOSTIC SIGN	0.3 - 0.6
POOR PROGNOSTIC SIGN	1.2 - 1.6



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Test Name Value Unit **Biological Reference interval** 

## IMMUNOPATHOLOGY/SEROLOGY **C-REACTIVE PROTEIN (CRP)**

C-REACTIVE PROTEIN (CRP) QUANTITATIVE: 1.04 mg/L 0.0 - 6.0

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

3. CRP levels (Quantitative) has been used to assess activity of inflammatory disease, to detect infections after surgery, to detect transplant

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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.



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Test Name	Value	Unit	Biological Reference interval

### WIDAL SLIDE AGGLUTINATION TEST

SALMONELLA TYPHI O	1 : 40	TITRE	1:80
by SLIDE AGGLUTINATION			
SALMONELLA TYPHI H	1:20	TITRE	1:160
by SLIDE AGGLUTINATION			
SALMONELLA PARATYPHI AH	NIL	TITRE	1:160
by SLIDE AGGLUTINATION			
SALMONELLA PARATYPHI BH	NIL	TITRE	1:160
by SLIDE AGGLUTINATION			

### **INTERPRETATION:**

- 1.Titres of 1:80 or more for "O" agglutinin is considered significant.
- 2. Titres of 1:160 or more for "H" agglutinin is considered significant.

#### LIMITATIONS

- 1.Agglutinins usually appear by 5th to 6th day of illness of enteric fever, hence a negative result in early stage is inconclusive. The titre then rises till 3rd or 4th week, after which it declines gradually.
- 2.Lower titres may be found in normal individuals.
- 3.A single positive result has less significance than the rising agglutination titre, since demonstration of rising titre four or more in 1st and 3rd week is considered as a definite evidence of infection.
- 4.A simultaneous rise in H agglutinins is suggestive of paratyphoid infection.

#### NOTE:

- 1. Individuals with prior infection or immunization with TAB vaccine may develop an ANAMNESTIC RESPONSE (False-Positive) during an unrelated fever i.e High titres of antibodies to various antigens. This may be differentiated by repitition of the test after a week.
- 2. The anamnestic response shows only a transient rise, while in enteric fever rise is sustained.
- 3.H agglutinins tend to persist for many months after vaccination but O agglutinins tend to disappear sooner i.e within 6 months. Therefore rise in Oagglutinins indicate recent infection.

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



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