

### **KOS Diagnostic Lab** (A Unit of KOS Healthcare)



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

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

**NAME** : Mrs. SHARMILA

**AGE/ GENDER** : 30 YRS/FEMALE **PATIENT ID** : 1534724

**COLLECTED BY** :012407010065 REG. NO./LAB NO.

REFERRED BY : LOOMBA HOSPITAL (AMBALA CANTT) **REGISTRATION DATE** : 01/Jul/2024 02:42 PM BARCODE NO. :01512330 **COLLECTION DATE** : 01/Jul/2024 02:48PM CLIENT CODE. : KOS DIAGNOSTIC LAB REPORTING DATE : 01/Jul/2024 03:10PM

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

Test Name Value Unit **Biological Reference interval** 

> **HAEMATOLOGY HAEMOGLOBIN (HB)**

HAEMOGLOBIN (HB) 12.0 - 16.0 10.8<sup>L</sup> qm/dL

by CALORIMETRIC

**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



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### **BLOOD GROUP (ABO) AND RH FACTOR TYPING**

REPORTING DATE

**ABO GROUP** by SLIDE AGGLUTINATION RH FACTOR TYPE by SLIDE AGGLUTINATION

CLIENT CODE.

**POSITIVE** 



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



CLIENT CODE.



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: 01/Jul/2024 05:03PM

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**BLEEDING TIME (BT)** 

REPORTING DATE

**BLEEDING TIME (BT)** 2 MIN 25 SEC MINS by DUKE METHOD



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CLIENT CODE.

by CAPILLARY TUBE METHOD



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**CLOTTING TIME (CT)** 

REPORTING DATE

**CLOTTING TIME (CT)** 5 MIN 15 SEC MINS



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CLIENT CODE. : KOS DIAGNOSTIC LAB REPORTING DATE : 01/Jul/2024 03:41PM

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### **CLINICAL CHEMISTRY/BIOCHEMISTRY GLUCOSE RANDOM (R)**

75.44 GLUCOSE RANDOM (R): PLASMA mg/dL NORMAL: < 140.00

by GLUCOSE OXIDASE - PEROXIDASE (GOD-POD) PREDIABETIC: 140.0 - 200.0 DIABETIC: > OR = 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-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.



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### **ENDOCRINOLOGY**

### THYROID STIMULATING HORMONE (TSH)

THYROID STIMULATING HORMONE (TSH): SERUM 1.897 µIU/mL 0.35 - 5.50

by CMIA (CHEMILUMINESCENT MICROPARTICLE IMMUNOASSAY)

3rd GENERATION, ULTRASENSITIVE

#### **INTERPRETATION:**

AGE	REFFERENCE RANGE (μIU/mL)
0 – 5 DAYS	0.70 – 15.20
6 Days – 2 Months	0.70 - 11.00
3 – 11 Months	0.70 - 8.40
1 – 5 Years	0.70 - 7.00
6 – 10 Years	0.60 - 5.50
11 - 15	0.50 - 5.50
> 20 Years (Adults)	0.27 - 5.50
PRE	EGNANCY
1st Trimester	0.10 - 3.00
2nd Trimester	0.20 - 3.00
3rd Trimester	0.30 - 4.10

NOTE:-TSH levels are subjected to circardian variation, reaching peak levels between 2-4 a.m and at a minimum between 6-10 pm. The variation is of the order of 50 %. Hence time of the day has influence on the measured serum TSH concentration.

**USE**:- TSH controls biosynthesis and release of thyroid harmones T4 & T3. It is a sensitive measure of thyroid function, especially useful in early or subclinical hypothyroidism, before the patient develops any clinical findings or goitre or any other thyroid function abnormality.

#### INCREASED LEVELS:

- 1. Primary or untreated hypothyroidism, may vary from 3 times to more than 100 times normal depending on degree of hypofunction.
- 2. Hypothyroid patients receiving insufficient thyroid replacement therapy.
- 3. Hashimotos thyroiditis.
- 4.DRUGS: Amphetamines, Iodine containing agents and dopamine antagonist.
- 5. Neonatal period, increase in 1st 2-3 days of life due to post-natal surge.

#### **DECREASED LEVELS:**

- 1.Toxic multi-nodular goitre & Thyroiditis.
- 2. Over replacement of thyroid harmone in treatment of hypothyroidism.
- 3. Autonomously functioning Thyroid adenoma
- 4. Secondary pituatary or hypothalmic hypothyroidism
- 5. Acute psychiatric illness
- 6.Severe dehydration.



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Test Name Value Unit Biological Reference interval

7.DRUGS: Glucocorticoids, Dopamine, Levodopa, T4 replacement therapy, Anti-thyroid drugs for thyrotoxicosis.

8. Pregnancy: 1st and 2nd Trimester

#### LIMITATIONS:

1.TSH may be normal in central hypothyroidism, recent rapid correction of hyperthyroidism or hypothyroidism, pregnancy, phenytoin therapy.

2. Autoimmune disorders may produce spurious results.



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### IMMUNOPATHOLOGY/SEROLOGY

HEPATITIS C VIRUS (HCV) ANTIBODY: TOTAL

HEPATITIS C ANTIBODY (HCV) TOTAL: SERUM S/CO 0.06 NEGATIVE: < 1.00 by CMIA (CHEMILUMINESCENT MICROPARTICLE IMMUNOASSAY)

HEPATITIS C ANTIBODY (HCV) TOTAL NON - REACTIVE

by CMIA (CHEMILUMINESCENT MICROPARTICLE IMMUNOASSAY)

INTERPRETATION:-

RESULT (INDEX)	REMARKS
< 1.00	NON - REACTIVE/NOT - DETECTED
>=1.00	REACTIVE/ASYMPTOMATIC/INFECTIVE STATE/CARRIER STATE.

Hepatitis C (HCV) is an RNA virus of Favivirus group transmitted via blood transfusions, transplantation, injection drug abusers, accidental needle punctures in healthcare workers, dialysis patients and rarely from mother to infant. 10 % of new cases show sexual transmission. As compared to HAV & HBV, chronic infection with HCV occurs in 85 % of infected individuals. In high risk population, the predictive value of Anti HCV for HCV infection is > 99% whereas in low risk populations it is only 25 %. USES:

- 1. Indicator of past or present infection, but does not differentiate between Acute/ Chronic/Resolved Infection.
- 2. Routine screening of low and high prevelance population including blood donors.

#### NOTE:

- 1. False positive results are seen in Auto-immune disease, Rheumatoid Factor, HYpergammaglobulinemia, Paraproteinemia, Passive antibody transfer, Anti-idiotypes and Anti-superoxide dismutase.
- 2. False negative results are seen in early Acute infection, Immunosuppression and Immuno—incompetence.

3. HCV-RNĀ PCR recommended in all reactive results to differentiate between past and present infection.



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POSITIVE: > 1.00

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### ANTI HUMAN IMMUNODEFICIENCY VIRUS (HIV) DUO ULTRA WITH (P-24 ANTIGEN DETECTION)

HIV 1/2 AND P24 ANTIGEN: SERUM

0.11

S/CO

NEGATIVE: < 1.00

by CMIA (CHEMILUMINESCENT MICROPARTICLE IMMUNOASSAY)

POSITIVE: > 1.00

: 01/Jul/2024 04:04PM

HIV 1/2 AND P24 ANTIGEN RESULT

**NON - REACTIVE** 

by CMIA (CHEMILUMINESCENT MICROPARTICLE IMMUNOASSAY)

INTERPRETATION:-

RESULT (INDEX)	REMARKS
< 1.00	NON - REACTIVE
> = 1.00	PROVISIONALLY REACTIVE

Non-Reactive result implies that antibodies to HIV 1/2 have not been detected in the sample. This menas that patient has either not been exposed to HIV 1/2 infection or the sample has been tested during the "window phase" i.e. before the development of detectable levels of antibodies. Hence a Non Reactive result does not exclude the possibility of exposure or infection with HIV 1/2.

RECOMMENDATIONS:

1. Results to be clinically correlated

2. Rarely falsenegativity/positivity may occur.



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### HEPATITIS B SURFACE ANTIGEN (HBsAg) ULTRA

HEPATITIS B SURFACE ANTIGEN (HBsAg): 0.19 S/CO NEGATIVE: < 1.0 SERUM POSITIVE: > 1.0

by CMIA (CHEMILUMINESCENT MICROPARTICLE IMMUNOASSAY)

HEPATITIS B SURFACE ANTIGEN (HBsAg)

NON REACTIVE

RESULT

by CMIA (CHEMILUMINESCENT MICROPARTICLE IMMUNOASSAY)

INTERPRETATION:

WELL REPUTED		
RESULT IN INDEX VALUE	REMARKS	
< 1.30	NEGATIVE (-ve)	
>=1.30	POSITIVE (+ve)	

Hepatitis B Virus (HBV) is a member of the Hepadna virus family causing infection of the liver with extremely variable clinical features. Hepatitis B is transmitted primarily by body fluids especially serum and also spread effectively sexually and from mother to baby. In most individuals HBV hepatitis is self limiting, but 1-2 % normal adolescent and adults develop Chronic Hepatitis. Frequency of chronic HBV infection is 5-10% in immunocompromised patients and 80 % neonates. The initial serological marker of acute infection is HBsAg which typically appears 2-3 months after infection and disappears 12-20 weeks after onset of symtoms. Persistence of HBsAg for more than 6 months indicates carrier state or Chronic Liver disease.



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**VDRL** 

REPORTING DATE

**VDRL** NON REACTIVE NON REACTIVE

by IMMUNOCHROMATOGRAPHY

#### **INTERPRETATION:**

CLIENT CODE.

- 1. Does not become positive until 7 10 days after appearance of chancre.
- 2. High titer (>1:16) active disease.
- 3. Low titer (<1:8) biological falsepositive test in 90% cases or due to late or late latent syphillis.
- 4. Treatment of primary syphillis causes progressive decline tonegative VDRL within 2 years.
- 5. Rising titer (4X) indicates relapse, reinfection, or treatment failure and need for retreatment.
- 6. May be nonreactive in early primary, late latent, and late syphillis (approx. 25% of cases).
- 7. Reactive and weakly reactive tests should always be confirmed with FTA-ABS (fluorescent treponemal antibody absorption test).

#### SHORTTERM FALSE POSITIVE TEST RESULTS (<6 MONTHS DURATION) MAY OCCURIN:

- 1. Acute viral illnesses (e.g., hepatitis, measles, infectious mononucleosis)
- 2.M. pneumoniae; Chlamydia; Malaria infection.
- 3. Some immunizations
- 4. Pregnancy (rare)

#### LONGTERM FALSE POSITIVE TEST RESULTS (>6 MONTHS DURATION) MAY OCCUR IN:

- 1. Serious underlying disease e.g., collagen vascular diseases, leprosy, malignancy.
- 2.Intravenous drug users.
- 3. Rheumatoid arthritis, thyroiditis, AIDS, Sjogren's syndrome.
- 4.<10 % of patients older thanage 70 years.
- 5. Patients taking some anti-hypertensive drugs.

\*\*\* End Of Report \*



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