

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

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

NAME : Mrs. HARJEET KAUR
AGE/ GENDER : 61 YRS/FEMALE
COLLECTED BY :
REFERRED BY :
BARCODE NO. : 01512607
CLIENT CODE. : KOS DIAGNOSTIC LAB
CLIENT ADDRESS : 6349/1, NICHOLSON ROAD, AMBALA CANTT

PATIENT ID : 1540055
REG. NO./LAB NO. : 012407060014
REGISTRATION DATE : 06/Jul/2024 08:47 AM
COLLECTION DATE : 06/Jul/2024 09:20AM
REPORTING DATE : 06/Jul/2024 09:03AM

| Test Name | Value | Unit | Biological Reference interval |
|-----------|-------|------|-------------------------------|
|-----------|-------|------|-------------------------------|

HAEMATOLOGY

HAEMOGLOBIN (HB)

| | | | |
|-------------------------------------|-------------------|-------|-------------|
| HAEMOGLOBIN (HB) by CALORIMETRIC | 10.4 ^L | gm/dL | 12.0 - 16.0 |
|-------------------------------------|-------------------|-------|-------------|

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 (DECREASED 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 erythropoietin (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)



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

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

NAME : Mrs. HARJEET KAUR
AGE/ GENDER : 61 YRS/FEMALE
COLLECTED BY :
REFERRED BY :
BARCODE NO. : 01512607
CLIENT CODE. : KOS DIAGNOSTIC LAB
CLIENT ADDRESS : 6349/1, NICHOLSON ROAD, AMBALA CANTT

PATIENT ID : 1540055
REG. NO./LAB NO. : 012407060014
REGISTRATION DATE : 06/Jul/2024 08:47 AM
COLLECTION DATE : 06/Jul/2024 09:20AM
REPORTING DATE : 06/Jul/2024 10:05AM

| Test Name | Value | Unit | Biological Reference interval |
|-----------|-------|------|-------------------------------|
|-----------|-------|------|-------------------------------|

CLINICAL CHEMISTRY/BIOCHEMISTRY

LIVER FUNCTION TEST (COMPLETE)

| | | | |
|---|---------------------|-------|---|
| BILIRUBIN TOTAL: SERUM by DIAZOTIZATION, SPECTROPHOTOMETRY | 0.51 | mg/dL | INFANT: 0.20 - 8.00 ADULT: 0.00 - 1.20 |
| BILIRUBIN DIRECT (CONJUGATED): SERUM by DIAZO MODIFIED, SPECTROPHOTOMETRY | 0.19 | mg/dL | 0.00 - 0.40 |
| BILIRUBIN INDIRECT (UNCONJUGATED): SERUM by CALCULATED, SPECTROPHOTOMETRY | 0.32 | mg/dL | 0.10 - 1.00 |
| SGOT/AST: SERUM by IFCC, WITHOUT PYRIDOXAL PHOSPHATE | 59.3 ^H | U/L | 7.00 - 45.00 |
| SGPT/ALT: SERUM by IFCC, WITHOUT PYRIDOXAL PHOSPHATE | 65.6 ^H | U/L | 0.00 - 49.00 |
| AST/ALT RATIO: SERUM by CALCULATED, SPECTROPHOTOMETRY | 0.9 | RATIO | 0.00 - 46.00 |
| ALKALINE PHOSPHATASE: SERUM by PARA NITROPHENYL PHOSPHATASE BY AMINO METHYL PROPANOL | 122.98 | U/L | 40.0 - 130.0 |
| GAMMA GLUTAMYL TRANSFERASE (GGT): SERUM by SZASZ, SPECTROPHOTOMETRY | 115.34 ^H | U/L | 0.00 - 55.0 |
| TOTAL PROTEINS: SERUM by BIURET, SPECTROPHOTOMETRY | 7.8 | gm/dL | 6.20 - 8.00 |
| ALBUMIN: SERUM by BROMOCRESOL GREEN | 4.08 | gm/dL | 3.50 - 5.50 |
| GLOBULIN: SERUM by CALCULATED, SPECTROPHOTOMETRY | 3.72 ^H | gm/dL | 2.30 - 3.50 |
| A : G RATIO: SERUM by CALCULATED, SPECTROPHOTOMETRY | 1.1 | RATIO | 1.00 - 2.00 |

INTERPRETATION

NOTE:- To be correlated in individuals having SGOT and SGPT values higher than Normal Reference 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 |



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 | : Mrs. HARJEET KAUR | PATIENT ID | : 1540055 |
| AGE/ GENDER | : 61 YRS/FEMALE | REG. NO./LAB NO. | : 012407060014 |
| COLLECTED BY | : | REGISTRATION DATE | : 06/Jul/2024 08:47 AM |
| REFERRED BY | : | COLLECTION DATE | : 06/Jul/2024 09:20AM |
| BARCODE NO. | : 01512607 | REPORTING DATE | : 06/Jul/2024 10:05AM |
| CLIENT CODE. | : KOS DIAGNOSTIC LAB | | |
| CLIENT ADDRESS | : 6349/1, NICHOLSON ROAD, AMBALA CANTT | | |

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

DECREASED:

1. Acute Hepatitis due to virus, drugs, toxins (with AST increased 3 to 10 times upper limit of normal)
2. Extra Hepatic cholestasis: 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 |




 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 | : Mrs. HARJEET KAUR | PATIENT ID | : 1540055 |
| AGE/ GENDER | : 61 YRS/FEMALE | REG. NO./LAB NO. | : 012407060014 |
| COLLECTED BY | : | REGISTRATION DATE | : 06/Jul/2024 08:47 AM |
| REFERRED BY | : | COLLECTION DATE | : 06/Jul/2024 09:20AM |
| BARCODE NO. | : 01512607 | REPORTING DATE | : 06/Jul/2024 10:20AM |
| CLIENT CODE. | : KOS DIAGNOSTIC LAB | | |
| CLIENT ADDRESS | : 6349/1, NICHOLSON ROAD, AMBALA CANTT | | |

| Test Name | Value | Unit | Biological Reference interval |
|-----------|-------|------|-------------------------------|
|-----------|-------|------|-------------------------------|

ENDOCRINOLOGY

THYROID FUNCTION TEST: TOTAL

| | | | |
|---|--------------------|--------|--------------|
| TRIIODOTHYRONINE (T3): SERUM <i>by CMIA (CHEMILUMINESCENT MICROPARTICLE IMMUNOASSAY)</i> | 0.818 | ng/mL | 0.35 - 1.93 |
| THYROXINE (T4): SERUM <i>by CMIA (CHEMILUMINESCENT MICROPARTICLE IMMUNOASSAY)</i> | 8.24 | µgm/dL | 4.87 - 12.60 |
| THYROID STIMULATING HORMONE (TSH): SERUM <i>by CMIA (CHEMILUMINESCENT MICROPARTICLE IMMUNOASSAY)</i> | 9.554 ^H | µIU/mL | 0.35 - 5.50 |

3rd GENERATION, ULTRASENSITIVE

INTERPRETATION:

TSH levels are subject to circadian 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 concentrations. TSH stimulates the production and secretion of the metabolically active hormones, thyroxine (T4) and triiodothyronine (T3). Failure at any level of regulation of the hypothalamic-pituitary-thyroid axis will result in either underproduction (hypothyroidism) or overproduction (hyperthyroidism) of T4 and/or T3.


| CLINICAL CONDITION | T3 | T4 | TSH |
|------------------------------|-----------------------|-----------------------|---------------------------------|
| Primary Hypothyroidism: | Reduced | Reduced | Increased (Significantly) |
| Subclinical Hypothyroidism: | Normal or Low Normal | Normal or Low Normal | High |
| Primary Hyperthyroidism: | Increased | Increased | Reduced (at times undetectable) |
| Subclinical Hyperthyroidism: | Normal or High Normal | Normal or High Normal | Reduced |


LIMITATIONS:-

1. T3 and T4 circulates in reversibly bound form with Thyroid binding globulins (TBG), and to a lesser extent albumin and Thyroid binding Pre Albumin so conditions in which TBG and protein levels alter such as pregnancy, excess estrogens, androgens, anabolic steroids and glucocorticoids may falsely affect the T3 and T4 levels and may cause false thyroid values for thyroid function tests.
2. Normal levels of T4 can also be seen in Hyperthyroid patients with :T3 Thyrotoxicosis, Decreased binding capacity due to hypoproteinemia or ingestion of certain drugs (eg: phenytoin, salicylates).
3. Serum T4 levels in neonates and infants are higher than values in the normal adult, due to the increased concentration of TBG in neonate serum.
4. TSH may be normal in central hypothyroidism, recent rapid correction of hyperthyroidism or hypothyroidism, pregnancy, phenytoin therapy.

| TRIIODOTHYRONINE (T3) | | THYROXINE (T4) | | THYROID STIMULATING HORMONE (TSH) | |
|-----------------------|-------------------------|-------------------|-------------------------|-----------------------------------|--------------------------|
| Age | Reference Range (ng/mL) | Age | Reference Range (µg/dL) | Age | Reference Range (µIU/mL) |
| 0 - 7 Days | 0.20 - 2.65 | 0 - 7 Days | 5.90 - 18.58 | 0 - 7 Days | 2.43 - 24.3 |
| 7 Days - 3 Months | 0.36 - 2.59 | 7 Days - 3 Months | 6.39 - 17.66 | 7 Days - 3 Months | 0.58 - 11.00 |
| 3 - 6 Months | 0.51 - 2.52 | 3 - 6 Months | 6.75 - 17.04 | 3 Days - 6 Months | 0.70 - 8.40 |




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 | : Mrs. HARJEET KAUR | PATIENT ID | : 1540055 |
| AGE/ GENDER | : 61 YRS/FEMALE | REG. NO./LAB NO. | : 012407060014 |
| COLLECTED BY | : | REGISTRATION DATE | : 06/Jul/2024 08:47 AM |
| REFERRED BY | : | COLLECTION DATE | : 06/Jul/2024 09:20AM |
| BARCODE NO. | : 01512607 | REPORTING DATE | : 06/Jul/2024 10:20AM |
| CLIENT CODE. | : KOS DIAGNOSTIC LAB | | |
| CLIENT ADDRESS | : 6349/1, NICHOLSON ROAD, AMBALA CANTT | | |

| Test Name | Value | Unit | Biological Reference interval |
|--|-------------|---------------------|-------------------------------|
| 6 - 12 Months | 0.74 - 2.40 | 6 - 12 Months | 7.10 - 16.16 |
| 1 - 10 Years | 0.92 - 2.28 | 1 - 10 Years | 6.00 - 13.80 |
| 11- 19 Years | 0.35 - 1.93 | 11 - 19 Years | 4.87- 13.20 |
| > 20 years (Adults) | 0.35 - 1.93 | > 20 Years (Adults) | 4.87 - 12.60 |
| RECOMMENDATIONS OF TSH LEVELS DURING PREGNANCY (μ U/mL) | | | |
| 1st Trimester | | | 0.10 - 2.50 |
| 2nd Trimester | | | 0.20 - 3.00 |
| 3rd Trimester | | | 0.30 - 4.10 |

INCREASED TSH LEVELS:

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

DECREASED TSH LEVELS:

- 1.Toxic multi-nodular goitre & Thyroiditis.
- 2.Over replacement of thyroid hormone in treatment of hypothyroidism.
- 3.Autonomously functioning Thyroid adenoma
- 4.Secondary pituitary or hypothalamic hypothyroidism
- 5.Acute psychiatric illness
- 6.Severe dehydration.
- 7.DRUGS: Glucocorticoids, Dopamine, Levodopa, T4 replacement therapy, Anti-thyroid drugs for thyrotoxicosis.
- 8.Pregnancy: 1st and 2nd Trimester

*** End Of Report ***




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


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

