



A PIONEER DIAGNOSTIC CENTRE

NAME : Mrs. SHIVANI

AGE/ GENDER : 31 YRS/FEMALE **PATIENT ID** : 1667325

COLLECTED BY REG. NO./LAB NO. : 122411100001

REFERRED BY **REGISTRATION DATE** : 10/Nov/2024 08:51 AM BARCODE NO. : 12505568 **COLLECTION DATE** : 10/Nov/2024 09:43AM CLIENT CODE. : P.K.R JAIN HEALTHCARE INSTITUTE REPORTING DATE : 10/Nov/2024 10:59AM

CLIENT ADDRESS : NASIRPUR, HISSAR ROAD, AMBALA CITY - HARYANA

Value Unit **Biological Reference interval Test Name**

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

GLUCOSE RANDOM (R): PLASMA 88.75 NORMAL: < 140.00 mg/dL

by GLUCOSE OXIDASE - PEROXIDASE (GOD-POD) 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)







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Value Unit **Biological Reference interval Test Name**

ENDOCRINOLOGY

THYROID FUNCTION TEST: TOTAL

TRIIODOTHYRONINE (T3): SERUM 0.35 - 1.931.25 ng/mL

by CMIA (CHEMILUMINESCENT MICROPARTICLE IMMUNOASSAY)

THYROXINE (T4): SERUM 7.44 μgm/dL 4.87 - 12.60

by CMIA (CHEMILUMINESCENT MICROPARTICLE IMMUNOASSAY)

THYROID STIMULATING HORMONE (TSH): SERUM 0.35 - 5.501.98 μIU/mL

by CMIA (CHEMILUMINESCENT MICROPARTICLE IMMUNOASSAY)

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 | Т3 | 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 |

- 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
- 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 | Refferance Range (ng/mL) | Age | Refferance 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 |
| 6 - 12 Months | 0.74 - 2.40 | 6 - 12 Months | 7.10 – 16.16 | 6 – 12 Months | 0.70 - 7.00 |



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440 Dated 17.5.2012 u/s 80 G OF INCOME TAX ACT. PAN NO. AAAAP1600. REPORT ATTRACTS THE CONDITIONS PRINTED OVERLEAF (P.T.O.)





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■ 0171-2532620, 8222896961 ■ pkrjainhealthcare@gmail.com

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| Test Name | | | Value | Unit | t | Biological Reference interval |
|---------------------|---------------|----------------------|------------------|---------------------|-------------|-------------------------------|
| 1 - 10 Years | 0.92 - 2.28 | 1 - 10 Years | 6.00 - 13.80 | 1 – 10 Years | 0.60 - 5.50 | |
| 11- 19 Years | 0.35 - 1.93 | 11 - 19 Years | 4.87- 13.20 | 11 – 19 Years | 0.50 - 5.50 | |
| > 20 years (Adults) | 0.35 - 1.93 | > 20 Years (Adults) | 4.87 - 12.60 | > 20 Years (Adults) | 0.35-5.50 | |
| | RECOM | MENDATIONS OF TSH LE | VELS DURING PREC | SNANCY (µIU/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, iodine 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 goiter & 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



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Value Unit **Biological Reference interval Test Name**

IMMUNOPATHOLOGY/SEROLOGY HEPATITIS C VIRUS (HCV) ANTIBODIES SCREENING

HEPATITIS C ANTIBODY (HCV) TOTAL

NON - REACTIVE

RESULT

by IMMUNOCHROMATOGRAPHY

INTERPRETATION:

1.Anti HCV total antibody assay identifies presence IgG antibodies in the serum. It is a useful screening test with a specificity of nearly 99%. 2.It becomes positive approximately 24 weeks after exposure. The test can not isolate an active ongoing HCV infection from an old infection that has been cleared. All positive results must be confirmed for active disease by an HCV PCR test.

FALSE NEGATIVE RESULTS SEEN IN:

1. Window period

2.Immunocompromised states.



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Test Name Value Unit **Biological Reference interval**

ANTI HUMAN IMMUNODEFICIENCY VIRUS (HIV) ANTIBODIES HIV (1 & 2) SCREENING

HIV 1/2 AND P24 ANTIGEN RESULT

NON - REACTIVE

by IMMUNOCHROMATOGRAPHY

INTERPRETATION:-

- 1.AIDS is caused by at least 2 known types of HIV viruses, HIV-1 and HIV HIV-2.
- 2. This NACO approved immuno-chromatographic solid phase ELISA assay detects antibodies against both HIV-1 and HIV-2 viruses.
- 3.The test is used for routine serologic screening of patients at risk for HIV-1 or HIV-2 infection.
- 4.All screening ELISA assays for HIV antibody detection have high sensitivity but have low specificity.
- 5.At this laboratory, all positive samples are cross checked for positivity with two alternate assays prior to reporting.

- 1. Confirmatory testing by Western blot is recommended for patients who are reactive for HIV by this assay.
- 2.Antibodies against HIV-1 and HIV-2 are usually not detectable until 6 to 12 weeks following exposure (window period) and are almost always detectable by 12 months.
- 3. The test is not recommended for children born to HIV infected mothers till the child turns two years old (as HIV antibodies may be transmitted passively to the child trans-placentally).

FALSE NEGATIVE RESULT SEEN IN:

- 1. Window period
- 2. Severe immuno-suppression including advanced AIDS.



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Value Unit **Biological Reference interval Test Name**

HEPATITIS B SURFACE ANTIGEN (HBsAg) SCREENING

HEPATITIS B SURFACE ANTIGEN (HBsAg)

NON - REACTIVE

by IMMUNOCHROMATOGRAPHY

INTERPRETATION:-

1.HBsAG is the first serological marker of HBV infection to appear in the blood (approximately 30-60 days after infection and prior to the onset of clinical disease). It is also the last viral protein to disappear from blood and usually disappears by three months after infection in self limiting acute Hepatitis B viral infection.

2.Persistence of HBsAg in blood for more than six months implies chronic infection. It is the most common marker used for diagnosis of an acute Hepatitis B infection but has very limited role in assessing patients suffering from chronic hepatitis.

FALSE NEGATIVE RESULT SEEN IN:

- 1. Window period.
- 2.Infection with HBsAg mutant strains
- 3. Hepatitis B Surface antigen (HBsAq) is the earliest indicator of HBV infection. Usually it appears in 27 41 days (as early as 14 days).
- 4.Appears 7 26 days before biochemical abnormalities. Peaks as ALT rises. Persists during the acute illness. Usually disappears 12-20 weeks after the onset of symptoms / laboratory abnormalities in 90% of cases.
- 5.Is the most reliable serologic marker of HBV infection. Persistence > 6 months defines carrier state. May also be found in chronic infection. Hepatitis B vaccination does not cause a positive HBsAg. Titers are not of clinical value.

NOTE:-

1.All reactive HBsAG Should be reconfirmed with neutralization test(HBsAg confirmatory test).

2.Anti - HAV IgM appears at the same time as symptoms in > 99% of cases, peaks within the first month, becomes nondetectable in 12 months (usually 6 months). Presence confirms diagnosis of recent acute infection.



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Value Unit **Biological Reference interval Test Name**

VDRI.

VDRL NON - REACTIVE NON REACTIVE

by IMMUNOCHROMATOGRAPHY

INTERPRETATION:

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 benonreactive in early primary, late latent, and late syphillis (approx. 25% ofcases).

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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