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

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

NAME	**: Mrs. DARSHIKA GARG**		
AGE/ GENDER	: 30 YRS/FEMALE	**PATIENT ID**	: 1602632
COLLECTED BY	: SURJESH	**REG. NO./LAB NO.**	**: 012409050025**
REFERRED BY	:	**REGISTRATION DATE**	: 05/Sep/2024 10:43 AM
BARCODE NO.	: 01516328	**COLLECTION DATE**	: 05/Sep/2024 10:49AM
CLIENT CODE.	: KOS DIAGNOSTIC LAB	**REPORTING DATE**	: 05/Sep/2024 12:02PM
CLIENT ADDRESS	: 6349/1, NICHOLSON ROAD, AMBALA CANTT		

Test Name	Value	Unit	Biological Reference interval

ENDOCRINOLOGY

THYROID FUNCTION TEST: FREE

FREE TRIIODOTHYRONINE (FT3): SERUM *by CMIA (CHEMILUMINESCENT MICROPARTICLE IMMUNOASSAY)*	2.014	pg/mL	1.60 - 3.90
FREE THYROXINE (FT4): SERUM *by CMIA (CHEMILUMINESCENT MICROPARTICLE IMMUNOASSAY)*	0.851	ng/dL	0.70 - 1.50
THYROID STIMULATING HORMONE (TSH): SERUM *by CMIA (CHEMILUMINESCENT MICROPARTICLE IMMUNOASSAY)*	1.448	µIU/mL	0.35 - 5.50

3rd GENERATION, ULTRASENSITIVE

INTERPREATION:

1. FT3 & FT4 are metabolic active form of thyroid harmones and correlate much better with clinical condition of the patient as compared to Total T4 levels. High FT3 & FT4 with normal TSH Levels and abnormal thyroid function (Total Thyroid) can occasionally be seen in cases of PERIPHERAL THYROID HARMONE RESISTANCE
2. 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.

INCREASED TSH LEVELS:

1. Primary hypothyroidism is accompanied by depressed serum FT3 & FT4 values and elevated serum TSH levels. 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. Primary hyperthyroidism is accompanied by elevated serum FT3 & FT4 values along with depressed 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 pituatary or hypothalmic hypothyroidism
5. Acute psychiatric illness
6. Severe dehydration.
7. DRUGS: Glucocorticoids, Dopamine, Levodopa, T4 replacement therapy, Anti-thyroid drugs for thyrotoxicosis.
8. Pregnancy: 1st Trimester

NOTE:

1. High FT3 levels accompanied by normal FT4 levels and depressed TSH levels may be seen T3 thyrotoxicosis, central hypothyroidism occurs due to pituitary or thalamic malfunction
2. Secondary & Tertiary hypothyroidism, this relatively rare but important condition is indicated by presence of low serum FT3 and FT4 levels, in conjugation with TSH levels that are paradoxically either low/normal or are not elevated to levels that are expected.

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Test Name	Value	Unit	Biological Reference interval

BETA HCG - TOTAL (QUANTITATIVE): MATERNAL

BETA HCG TOTAL, PREGNANCY MATERNAL: SERUM *by CLIA (CHEMILUMINESCENCE IMMUNOASSAY)*	**152553^{H}**	mIU/mL	< 5.0

INTERPRETATION:

MEN:	mIU/ml	< 2.0
NON PREGNANT PRE-MENOPAUSAL WOMEN:	mIU/ml	< 5.0
MENOPAUSAL WOMEN:	mIU/ml	< 7.0
BETA HCG EXPECTED VALUES IN ACCORDANCE TO WEEKS OF GESTATIONAL AGE		
WEEKS OF GESTATION	Unit	Value
4-5	mIU/ml	1500 -23000
5-6	mIU/ml	3400 - 135300
6-7	mIU/ml	10500 - 161000
7-8	mIU/ml	18000 - 209000
8-9	mIU/ml	37500 - 219000
9-10	mIU/ml	42800 - 218000
10-11	mIU/ml	33700 - 218700
11-12	mIU/ml	21800 - 193200
12-13	mIU/ml	20300 - 166100
13-14	mIU/ml	15400 - 190000
2rd TRIMESTER	mIU/ml	2800 - 176100
3rd TRIMESTER	mIU/ml	2800 - 144400

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Test Name	Value	Unit	Biological Reference interval

1.hCG is a Glycoprotein with alpha and beta chains. Beta subunit is specific to hCG.
2.It is largely secreted by trophoblastic tissue. Small amounts may be secreted by fetal tissues and by the adult ant pituitary.
INCREASED :
1.Pregnancy
2.Gestationalsite & Non gestational trophoblastic neoplasia.
3.In mixed germ cell tumors.
SIGNIFICANTLY HIGHER THAN EXPECTED LEVEL:
1.Multiple pregnancies & High risk molar pregnancies are usually associated with levels in excess of one lac mIU/ml.
2.Erythroblastosis fetalis & Downs syndrome.
DECREASED:
1.Ectopic pregnancy.
2.Intra-uterine fetal death.
NOTE:
1.The test becomes positive 7-9 days after the midcycle surge that precedes ovulation (time of blastocyst implantation). Blood levels rise rapidly after this and double every 1.4 - 2 days.
2.Peak values are usually seen at 60-80 days of LMP. The levels then begin to taper and ebb out around the 20th week. These low levels are then maintained throughout pregnancy.
3.Doubling time: In intra-uterine pregnancy, serum hCG levels increase by approximately 66% every 48 hrs.Inappropriately rising serum hCG levels are suggestive of dying or ectopic pregnancy.
CAUTION:
Spuriously high levels (Phantom hCG) may be seen in presence of heterophilic antibodies (found in some normal people). If persistently raised levels are seen in a non-pregnant patient with no evidence of other obvious causes for such an increase a urine hCG assay may help confirm presence of the heterophile antibodies.

*** End Of Report ***

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