

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

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

NAME : Mrs. RAJNI
AGE/ GENDER : 30 YRS/FEMALE
COLLECTED BY :
REFERRED BY :
BARCODE NO. : 01521805
CLIENT CODE. : KOS DIAGNOSTIC LAB
CLIENT ADDRESS : 6349/1, NICHOLSON ROAD, AMBALA CANTT

PATIENT ID : 1687604
REG. NO./LAB NO. : 012412010037
REGISTRATION DATE : 01/Dec/2024 12:37 PM
COLLECTION DATE : 01/Dec/2024 12:48PM
REPORTING DATE : 01/Dec/2024 01:06PM

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

SWASTHYA WELLNESS PANEL: GT
COMPLETE BLOOD COUNT (CBC)

RED BLOOD CELLS (RBCS) COUNT AND INDICES

HAEMOGLOBIN (HB) by CALORIMETRIC	12.8	gm/dL	12.0 - 16.0
RED BLOOD CELL (RBC) COUNT by HYDRO DYNAMIC FOCUSING, ELECTRICAL IMPEDENCE	4.7	Millions/cmm	3.50 - 5.00
PACKED CELL VOLUME (PCV) by CALCULATED BY AUTOMATED HEMATOLOGY ANALYZER	39.8	%	37.0 - 50.0
MEAN CORPUSCULAR VOLUME (MCV) by CALCULATED BY AUTOMATED HEMATOLOGY ANALYZER	84.8	fL	80.0 - 100.0
MEAN CORPUSCULAR HAEMOGLOBIN (MCH) by CALCULATED BY AUTOMATED HEMATOLOGY ANALYZER	27.2	pg	27.0 - 34.0
MEAN CORPUSCULAR HEMOGLOBIN CONC. (MCHC) by CALCULATED BY AUTOMATED HEMATOLOGY ANALYZER	32	g/dL	32.0 - 36.0
RED CELL DISTRIBUTION WIDTH (RDW-CV) by CALCULATED BY AUTOMATED HEMATOLOGY ANALYZER	13.1	%	11.00 - 16.00
RED CELL DISTRIBUTION WIDTH (RDW-SD) by CALCULATED BY AUTOMATED HEMATOLOGY ANALYZER	41.7	fL	35.0 - 56.0
MENTZERS INDEX by CALCULATED	18.04	RATIO	BETA THALASSEMIA TRAIT: < 13.0 IRON DEFICIENCY ANEMIA: >13.0
GREEN & KING INDEX by CALCULATED	23.61	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	7640	/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 %



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. RAJNI	PATIENT ID	: 1687604
AGE/ GENDER	: 30 YRS/FEMALE	REG. NO./LAB NO.	: 012412010037
COLLECTED BY	:	REGISTRATION DATE	: 01/Dec/2024 12:37 PM
REFERRED BY	:	COLLECTION DATE	: 01/Dec/2024 12:48PM
BARCODE NO.	: 01521805	REPORTING DATE	: 01/Dec/2024 01:06PM
CLIENT CODE.	: KOS DIAGNOSTIC LAB		
CLIENT ADDRESS	: 6349/1, NICHOLSON ROAD, AMBALA CANTT		

Test Name	Value	Unit	Biological Reference interval
<u>DIFFERENTIAL LEUCOCYTE COUNT (DLC)</u>			
NEUTROPHILS <i>by FLOW CYTOMETRY BY SF CUBE & MICROSCOPY</i>	66	%	50 - 70
LYMPHOCYTES <i>by FLOW CYTOMETRY BY SF CUBE & MICROSCOPY</i>	27	%	20 - 40
EOSINOPHILS <i>by FLOW CYTOMETRY BY SF CUBE & MICROSCOPY</i>	1	%	1 - 6
MONOCYTES <i>by FLOW CYTOMETRY BY SF CUBE & MICROSCOPY</i>	6	%	2 - 12
BASOPHILS <i>by FLOW CYTOMETRY BY SF CUBE & MICROSCOPY</i>	0	%	0 - 1
<u>ABSOLUTE LEUKOCYTES (WBC) COUNT</u>			
ABSOLUTE NEUTROPHIL COUNT <i>by FLOW CYTOMETRY BY SF CUBE & MICROSCOPY</i>	5042	/cmm	2000 - 7500
ABSOLUTE LYMPHOCYTE COUNT <i>by FLOW CYTOMETRY BY SF CUBE & MICROSCOPY</i>	2063	/cmm	800 - 4900
ABSOLUTE EOSINOPHIL COUNT <i>by FLOW CYTOMETRY BY SF CUBE & MICROSCOPY</i>	76	/cmm	40 - 440
ABSOLUTE MONOCYTE COUNT <i>by FLOW CYTOMETRY BY SF CUBE & MICROSCOPY</i>	458	/cmm	80 - 880
ABSOLUTE BASOPHIL COUNT <i>by FLOW CYTOMETRY BY SF CUBE & MICROSCOPY</i>	0	/cmm	0 - 110
ABSOLUTE IMMATURE GRANULOCYTE COUNT <i>by FLOW CYTOMETRY BY SF CUBE & MICROSCOPY</i>	0	/cmm	0.0 - 999.0
<u>PLATELETS AND OTHER PLATELET PREDICTIVE MARKERS.</u>			
PLATELET COUNT (PLT) <i>by HYDRO DYNAMIC FOCUSING, ELECTRICAL IMPEDENCE</i>	217000	/cmm	150000 - 450000
PLATELETCRIT (PCT) <i>by HYDRO DYNAMIC FOCUSING, ELECTRICAL IMPEDENCE</i>	0.27	%	0.10 - 0.36
MEAN PLATELET VOLUME (MPV) <i>by HYDRO DYNAMIC FOCUSING, ELECTRICAL IMPEDENCE</i>	12 ^H	fL	6.50 - 12.0
PLATELET LARGE CELL COUNT (P-LCC) <i>by HYDRO DYNAMIC FOCUSING, ELECTRICAL IMPEDENCE</i>	90000	/cmm	30000 - 90000
PLATELET LARGE CELL RATIO (P-LCR) <i>by HYDRO DYNAMIC FOCUSING, ELECTRICAL IMPEDENCE</i>	41.6	%	11.0 - 45.0
PLATELET DISTRIBUTION WIDTH (PDW) <i>by HYDRO DYNAMIC FOCUSING, ELECTRICAL IMPEDENCE</i>	16.4	%	15.0 - 17.0




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. RAJNI	PATIENT ID	: 1687604
AGE/ GENDER	: 30 YRS/FEMALE	REG. NO./LAB NO.	: 012412010037
COLLECTED BY	:	REGISTRATION DATE	: 01/Dec/2024 12:37 PM
REFERRED BY	:	COLLECTION DATE	: 01/Dec/2024 12:48PM
BARCODE NO.	: 01521805	REPORTING DATE	: 01/Dec/2024 01:06PM
CLIENT CODE.	: KOS DIAGNOSTIC LAB		
CLIENT ADDRESS	: 6349/1, NICHOLSON ROAD, AMBALA CANTT		

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

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. RAJNI	PATIENT ID	: 1687604
AGE/ GENDER	: 30 YRS/FEMALE	REG. NO./LAB NO.	: 012412010037
COLLECTED BY	:	REGISTRATION DATE	: 01/Dec/2024 12:37 PM
REFERRED BY	:	COLLECTION DATE	: 01/Dec/2024 12:48PM
BARCODE NO.	: 01521805	REPORTING DATE	: 03/Dec/2024 01:14PM
CLIENT CODE.	: KOS DIAGNOSTIC LAB		
CLIENT ADDRESS	: 6349/1, NICHOLSON ROAD, AMBALA CANTT		

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

GLYCOSYLATED HAEMOGLOBIN (HbA1c)

GLYCOSYLATED HAEMOGLOBIN (HbA1c): WHOLE BLOOD <i>by HPLC (HIGH PERFORMANCE LIQUID CHROMATOGRAPHY)</i>	5	%	4.0 - 6.4
ESTIMATED AVERAGE PLASMA GLUCOSE <i>by HPLC (HIGH PERFORMANCE LIQUID CHROMATOGRAPHY)</i>	96.8	mg/dL	60.00 - 140.00

INTERPRETATION:

AS PER AMERICAN DIABETES ASSOCIATION (ADA):		
REFERENCE GROUP	GLYCOSYLATED HEMOGLOBIN (HbA1c) in %	
Non diabetic Adults \geq 18 years	<5.7	
At Risk (Prediabetes)	5.7 – 6.4	
Diagnosing Diabetes	\geq 6.5	
Therapeutic goals for glycemic control	Age > 19 Years	
	Goals of Therapy:	< 7.0
	Actions Suggested:	>8.0
	Age < 19 Years	
	Goal of therapy:	<7.5

COMMENTS:

- Glycosylated hemoglobin (HbA1c) test is three monthly monitoring done to assess compliance with therapeutic regimen in diabetic patients.
- Since Hb1c reflects long term fluctuations in blood glucose concentration, a diabetic patient who has recently under good control may still have high concentration of HbA1c. Converse is true for a diabetic previously under good control but now poorly controlled.
- Target goals of < 7.0 % may be beneficial in patients with short duration of diabetes, long life expectancy and no significant cardiovascular disease. In patients with significant complications of diabetes, limited life expectancy or extensive co-morbid conditions, targeting a goal of < 7.0% may not be appropriate.
- High HbA1c (>9.0 -9.5 %) is strongly associated with risk of development and rapid progression of microvascular and nerve complications
- Any condition that shorten RBC life span like acute blood loss, hemolytic anemia falsely lower HbA1c results.
- HbA1c results from patients with HbSS, HbSC and HbD must be interpreted with caution, given the pathological processes including anemia, increased red cell turnover, and transfusion requirement that adversely impact HbA1c as a marker of long-term glycemic control.
- Specimens from patients with polycythemia or post-splenectomy may exhibit increase in HbA1c values due to a somewhat longer life span of the red cells.





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. RAJNI	PATIENT ID	: 1687604
AGE/ GENDER	: 30 YRS/FEMALE	REG. NO./LAB NO.	: 012412010037
COLLECTED BY	:	REGISTRATION DATE	: 01/Dec/2024 12:37 PM
REFERRED BY	:	COLLECTION DATE	: 01/Dec/2024 12:48PM
BARCODE NO.	: 01521805	REPORTING DATE	: 01/Dec/2024 01:20PM
CLIENT CODE.	: KOS DIAGNOSTIC LAB		
CLIENT ADDRESS	: 6349/1, NICHOLSON ROAD, AMBALA CANTT		

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

ERYTHROCYTE SEDIMENTATION RATE (ESR)

ERYTHROCYTE SEDIMENTATION RATE (ESR)	9	mm/1st hr	0 - 20
--------------------------------------	---	-----------	--------

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 aspirin, cortisone, and quinine may decrease it




 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. RAJNI
AGE/ GENDER : 30 YRS/FEMALE
COLLECTED BY :
REFERRED BY :
BARCODE NO. : 01521805
CLIENT CODE. : KOS DIAGNOSTIC LAB
CLIENT ADDRESS : 6349/1, NICHOLSON ROAD, AMBALA CANTT

PATIENT ID : 1687604
REG. NO./LAB NO. : 012412010037
REGISTRATION DATE : 01/Dec/2024 12:37 PM
COLLECTION DATE : 01/Dec/2024 12:48PM
REPORTING DATE : 02/Dec/2024 06:05PM

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

HAEMOGLOBIN - HIGH PERFORMANCE LIQUID CHROMATOGRAPHY (HB-HPLC)


HAEMOGLOBIN VARIANTS


HAEMOGLOBIN A0 (ADULT) <i>by HPLC (HIGH PERFORMANCE LIQUID CHROMATOGRAPHY)</i>	84.5	%	83.00 - 90.00
HAEMOGLOBIN F (FOETAL) <i>by HPLC (HIGH PERFORMANCE LIQUID CHROMATOGRAPHY)</i>	<0.8	%	0.00 - 2.0
HAEMOGLOBIN A2 <i>by HPLC (HIGH PERFORMANCE LIQUID CHROMATOGRAPHY)</i>	3.6	%	1.50 - 3.70
PEAK 3 <i>by HPLC (HIGH PERFORMANCE LIQUID CHROMATOGRAPHY)</i>	4.9	%	< 10.0
OTHERS-NON SPECIFIC <i>by HPLC (HIGH PERFORMANCE LIQUID CHROMATOGRAPHY)</i>	ABSENT	%	ABSENT
HAEMOGLOBIN S <i>by HPLC (HIGH PERFORMANCE LIQUID CHROMATOGRAPHY)</i>	NOT DETECTED	%	< 0.02
HAEMOGLOBIN D (PUNJAB) <i>by HPLC (HIGH PERFORMANCE LIQUID CHROMATOGRAPHY)</i>	NOT DETECTED	%	< 0.02
HAEMOGLOBIN E <i>by HPLC (HIGH PERFORMANCE LIQUID CHROMATOGRAPHY)</i>	NOT DETECTED	%	< 0.02
HAEMOGLOBIN C <i>by HPLC (HIGH PERFORMANCE LIQUID CHROMATOGRAPHY)</i>	NOT DETECTED	%	< 0.02
UNKNOWN UNIDENTIFIED VARIANTS <i>by HPLC (HIGH PERFORMANCE LIQUID CHROMATOGRAPHY)</i>	NOT DETECTED	%	< 0.02
GLYCOSYLATED HAEMOGLOBIN (HbA1c): WHOLE BLOOD <i>by HPLC (HIGH PERFORMANCE LIQUID CHROMATOGRAPHY)</i>	5	%	4.0 - 6.4

RED BLOOD CELLS (RBCS) COUNT AND INDICES

HAEMOGLOBIN (HB) <i>by AUTOMATED HEMATOLOGY ANALYZER</i>	12.8	gm/dL	12.0 - 16.0
RED BLOOD CELL (RBC) COUNT <i>by AUTOMATED HEMATOLOGY ANALYZER</i>	4.7	Millions/cmm	3.50 - 5.00
PACKED CELL VOLUME (PCV) <i>by AUTOMATED HEMATOLOGY ANALYZER</i>	39.8	%	37.0 - 50.0
MEAN CORPUSCULAR VOLUME (MCV) <i>by AUTOMATED HEMATOLOGY ANALYZER</i>	84.8	fL	80.0 - 100.0
MEAN CORPUSCULAR HAEMOGLOBIN (MCH) <i>by AUTOMATED HEMATOLOGY ANALYZER</i>	27.2	pg	27.0 - 34.0




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. RAJNI	PATIENT ID	: 1687604
AGE/ GENDER	: 30 YRS/FEMALE	REG. NO./LAB NO.	: 012412010037
COLLECTED BY	:	REGISTRATION DATE	: 01/Dec/2024 12:37 PM
REFERRED BY	:	COLLECTION DATE	: 01/Dec/2024 12:48PM
BARCODE NO.	: 01521805	REPORTING DATE	: 02/Dec/2024 06:05PM
CLIENT CODE.	: KOS DIAGNOSTIC LAB		
CLIENT ADDRESS	: 6349/1, NICHOLSON ROAD, AMBALA CANTT		

Test Name	Value	Unit	Biological Reference interval
MEAN CORPUSCULAR HEMOGLOBIN CONC. (MCHC) <i>by AUTOMATED HEMATOLOGY ANALYZER</i>	32	g/dL	32.0 - 36.0
RED CELL DISTRIBUTION WIDTH (RDW-CV) <i>by AUTOMATED HEMATOLOGY ANALYZER</i>	13.1	%	11.00 - 16.00
RED CELL DISTRIBUTION WIDTH (RDW-SD) <i>by AUTOMATED HEMATOLOGY ANALYZER</i>	41.7	fL	35.0 - 56.0
OTHERS			
NAKED EYE SINGLE TUBE RED CELL OSMOTIC FRAGILITY TEST <i>by SINGLE RED CELL OSMOTIC FRAGILITY</i>	NEGATIVE (-ve)		NEGATIVE (-ve)
MENTZERS INDEX <i>by CALCULATED</i>	18.04	RATIO	BETA THALASSEMIA TRAIT: < 13.0 IRON DEFICIENCY ANEMIA: >13.0

INTERPRETATION

THE ABOVE FINDINGS ARE SUGGESTIVE OF NORMAL HAEMOGLOBIN CHROMATOGRAPHIC PATTERN

INTERPRETATION:

The Thalassemia syndromes, considered the most common genetic disorder worldwide, are a heterogenous group of mendelian disorders, all characterized by a lack of/or decreased synthesis of either the alpha-globin chains (alpha thalassemia) or the beta-globin chains (beta thalassemia) of haemoglobin.

HIGH PERFORMANCE LIQUID CHROMATOGRAPHY (HPLC):

1. HAEMOGLOBIN VARIANT ANALYSIS, BLOOD- High Performance liquid chromatography (HPLC) is a fast & accurate method for determining the presence and for quantitation of various types of normal haemoglobin and common abnormal hb variants, including but not limited to Hb S, C, E, D and Beta -thalassemia.
2. The diagnosis of these abnormal haemoglobin should be confirmed by DNA analysis.
3. The method use has a limited role in the diagnosis of alpha thalassemia.
4. Slight elevation in haemoglobin A2 may also occur in hyperthyroidism or when there is deficiency of vitamin b12 or folate and this should be distinguished from inherited elevation of HbA2 in Beta- thalassemia trait.


NAKED EYE SINGLE TUBE RED CELL OSMOTIC FRAGILITY TEST (NESTROFT):


1. It is a screening test to distinguish beta thalassemia trait. Also called as Naked Eye Single Tube Red Cell Osmotic Fragility Test.
2. The test showed a sensitivity of 100%, specificity of 85.47%, a positive predictive value of 66% and a negative predictive value of 100%.
3. A high negative predictive value can reasonably rule out beta thalassemia trait cases. So, it should be adopted as a screening test for beta thalassemia trait, as it is not practical or feasible to employ HbA2 in every case of anemia in childhood.

MENTZERS INDEX:

1. The Mentzer index, helpful in differentiating iron deficiency anemia from beta thalassemia. If a CBC indicates microcytic anemia, the Mentzer index is said to be a method of distinguishing between them.
2. If the index is less than 13, thalassemia is said to be more likely. If the result is greater than 13, then iron-deficiency anemia is said to be more likely.
3. The principle involved is as follows: In iron deficiency, the marrow cannot produce as many RBCs and they are small (microcytic), so the RBC




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. RAJNI	PATIENT ID	: 1687604
AGE/ GENDER	: 30 YRS/FEMALE	REG. NO./LAB NO.	: 012412010037
COLLECTED BY	:	REGISTRATION DATE	: 01/Dec/2024 12:37 PM
REFERRED BY	:	COLLECTION DATE	: 01/Dec/2024 12:48PM
BARCODE NO.	: 01521805	REPORTING DATE	: 02/Dec/2024 06:05PM
CLIENT CODE.	: KOS DIAGNOSTIC LAB		
CLIENT ADDRESS	: 6349/1, NICHOLSON ROAD, AMBALA CANTT		

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

count and the MCV will both be low, and as a result, the index will be greater than 13. Conversely, in thalassemia, which is a disorder of globin synthesis, the number of RBC's produced is normal, but the cells are smaller and more fragile. Therefore, the RBC count is normal, but the MCV is low, so the index will be less than 13.

NOTE: In practice, the Mentzer index is not a reliable indicator and should not, by itself, be used to differentiate. In addition, it would be possible for a patient with a microcytic anemia to have both iron deficiency and thalassemia, in which case the index would only suggest iron deficiency.




 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. RAJNI
AGE/ GENDER : 30 YRS/FEMALE
COLLECTED BY :
REFERRED BY :
BARCODE NO. : 01521805
CLIENT CODE. : KOS DIAGNOSTIC LAB
CLIENT ADDRESS : 6349/1, NICHOLSON ROAD, AMBALA CANTT

PATIENT ID : 1687604
REG. NO./LAB NO. : 012412010037
REGISTRATION DATE : 01/Dec/2024 12:37 PM
COLLECTION DATE : 01/Dec/2024 12:48PM
REPORTING DATE : 01/Dec/2024 02:04PM

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

CLINICAL CHEMISTRY/BIOCHEMISTRY

GLUCOSE FASTING (F)

GLUCOSE FASTING (F): PLASMA by GLUCOSE OXIDASE - PEROXIDASE (GOD-POD)	113.2 ^H	mg/dL	NORMAL: < 100.0 PREDIABETIC: 100.0 - 125.0 DIABETIC: > OR = 126.0
--	--------------------	-------	---

INTERPRETATION

IN ACCORDANCE WITH AMERICAN DIABETES ASSOCIATION GUIDELINES:

1. A fasting plasma glucose level below 100 mg/dl is considered normal.
2. A fasting plasma glucose level between 100 - 125 mg/dl is considered as glucose intolerant or prediabetic. A fasting and post-prandial blood test (after consumption of 75 gms of glucose) is recommended for all such patients.
3. A fasting plasma glucose level of above 125 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)

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. RAJNI	PATIENT ID	: 1687604
AGE/ GENDER	: 30 YRS/FEMALE	REG. NO./LAB NO.	: 012412010037
COLLECTED BY	:	REGISTRATION DATE	: 01/Dec/2024 12:37 PM
REFERRED BY	:	COLLECTION DATE	: 01/Dec/2024 12:48PM
BARCODE NO.	: 01521805	REPORTING DATE	: 01/Dec/2024 02:45PM
CLIENT CODE.	: KOS DIAGNOSTIC LAB		
CLIENT ADDRESS	: 6349/1, NICHOLSON ROAD, AMBALA CANTT		

Test Name	Value	Unit	Biological Reference interval
LIPID PROFILE : BASIC			
CHOLESTEROL TOTAL: SERUM <i>by CHOLESTEROL OXIDASE PAP</i>	137.37	mg/dL	OPTIMAL: < 200.0 BORDERLINE HIGH: 200.0 - 239.0 HIGH CHOLESTEROL: > OR = 240.0
TRIGLYCERIDES: SERUM <i>by GLYCEROL PHOSPHATE OXIDASE (ENZYMATIC)</i>	97.23	mg/dL	OPTIMAL: < 150.0 BORDERLINE HIGH: 150.0 - 199.0 HIGH: 200.0 - 499.0 VERY HIGH: > OR = 500.0
HDL CHOLESTEROL (DIRECT): SERUM <i>by SELECTIVE INHIBITION</i>	55.84	mg/dL	LOW HDL: < 30.0 BORDERLINE HIGH HDL: 30.0 - 60.0 HIGH HDL: > OR = 60.0
LDL CHOLESTEROL: SERUM <i>by CALCULATED, SPECTROPHOTOMETRY</i>	62.08	mg/dL	OPTIMAL: < 100.0 ABOVE OPTIMAL: 100.0 - 129.0 BORDERLINE HIGH: 130.0 - 159.0 HIGH: 160.0 - 189.0 VERY HIGH: > OR = 190.0
NON HDL CHOLESTEROL: SERUM <i>by CALCULATED, SPECTROPHOTOMETRY</i>	81.53	mg/dL	OPTIMAL: < 130.0 ABOVE OPTIMAL: 130.0 - 159.0 BORDERLINE HIGH: 160.0 - 189.0 HIGH: 190.0 - 219.0 VERY HIGH: > OR = 220.0
VLDL CHOLESTEROL: SERUM <i>by CALCULATED, SPECTROPHOTOMETRY</i>	19.45	mg/dL	0.00 - 45.00
TOTAL LIPIDS: SERUM <i>by CALCULATED, SPECTROPHOTOMETRY</i>	371.97	mg/dL	350.00 - 700.00
CHOLESTEROL/HDL RATIO: SERUM <i>by CALCULATED, SPECTROPHOTOMETRY</i>	2.46	RATIO	LOW RISK: 3.30 - 4.40 AVERAGE RISK: 4.50 - 7.0 MODERATE RISK: 7.10 - 11.0 HIGH RISK: > 11.0




 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. RAJNI	PATIENT ID	: 1687604
AGE/ GENDER	: 30 YRS/FEMALE	REG. NO./LAB NO.	: 012412010037
COLLECTED BY	:	REGISTRATION DATE	: 01/Dec/2024 12:37 PM
REFERRED BY	:	COLLECTION DATE	: 01/Dec/2024 12:48PM
BARCODE NO.	: 01521805	REPORTING DATE	: 01/Dec/2024 02:45PM
CLIENT CODE.	: KOS DIAGNOSTIC LAB		
CLIENT ADDRESS	: 6349/1, NICHOLSON ROAD, AMBALA CANTT		


Test Name	Value	Unit	Biological Reference interval
LDL/HDL RATIO: SERUM <i>by CALCULATED, SPECTROPHOTOMETRY</i>	1.11	RATIO	LOW RISK: 0.50 - 3.0 MODERATE RISK: 3.10 - 6.0 HIGH RISK: > 6.0
TRIGLYCERIDES/HDL RATIO: SERUM <i>by CALCULATED, SPECTROPHOTOMETRY</i>	1.74 ^L	RATIO	3.00 - 5.00

INTERPRETATION:

- Measurements in the same patient can show physiological & analytical variations. Three serial samples 1 week apart are recommended for Total Cholesterol, Triglycerides, HDL & LDL Cholesterol.
- As per NLA-2014 guidelines, all adults above the age of 20 years should be screened for lipid status. Selective screening of children above the age of 2 years with a family history of premature cardiovascular disease or those with at least one parent with high total cholesterol is recommended.
- Low HDL levels are associated with increased risk for Atherosclerotic Cardiovascular disease (ASCVD) due to insufficient HDL being available to participate in reverse cholesterol transport, the process by which cholesterol is eliminated from peripheral tissues.
- NLA-2014 identifies Non HDL Cholesterol (an indicator of all atherogenic lipoproteins such as LDL, VLDL, IDL, Lp(a), Chylomicron remnants) along with LDL-cholesterol as co-primary target for cholesterol lowering therapy. Note that major risk factors can modify treatment goals for LDL & Non HDL.
- Additional testing for Apolipoprotein B, hsCRP, Lp(a) & LP-PLA2 should be considered among patients with moderate risk for ASCVD for risk refinement




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. RAJNI	PATIENT ID	: 1687604
AGE/ GENDER	: 30 YRS/FEMALE	REG. NO./LAB NO.	: 012412010037
COLLECTED BY	:	REGISTRATION DATE	: 01/Dec/2024 12:37 PM
REFERRED BY	:	COLLECTION DATE	: 01/Dec/2024 12:48PM
BARCODE NO.	: 01521805	REPORTING DATE	: 01/Dec/2024 02:45PM
CLIENT CODE.	: KOS DIAGNOSTIC LAB		
CLIENT ADDRESS	: 6349/1, NICHOLSON ROAD, AMBALA CANTT		

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

LIVER FUNCTION TEST (COMPLETE)

BILIRUBIN TOTAL: SERUM <i>by DIAZOTIZATION, SPECTROPHOTOMETRY</i>	0.53	mg/dL	INFANT: 0.20 - 8.00 ADULT: 0.00 - 1.20
BILIRUBIN DIRECT (CONJUGATED): SERUM <i>by DIAZO MODIFIED, SPECTROPHOTOMETRY</i>	0.15	mg/dL	0.00 - 0.40
BILIRUBIN INDIRECT (UNCONJUGATED): SERUM <i>by CALCULATED, SPECTROPHOTOMETRY</i>	0.38	mg/dL	0.10 - 1.00
SGOT/AST: SERUM <i>by IFCC, WITHOUT PYRIDOXAL PHOSPHATE</i>	19.2	U/L	7.00 - 45.00
SGPT/ALT: SERUM <i>by IFCC, WITHOUT PYRIDOXAL PHOSPHATE</i>	17.3	U/L	0.00 - 49.00
AST/ALT RATIO: SERUM <i>by CALCULATED, SPECTROPHOTOMETRY</i>	1.11	RATIO	0.00 - 46.00
ALKALINE PHOSPHATASE: SERUM <i>by PARA NITROPHENYL PHOSPHATASE BY AMINO METHYL PROPANOL</i>	80.19	U/L	40.0 - 130.0
GAMMA GLUTAMYL TRANSFERASE (GGT): SERUM <i>by SZASZ, SPECTROPHOTOMETRY</i>	16.75	U/L	0.00 - 55.0
TOTAL PROTEINS: SERUM <i>by BIURET, SPECTROPHOTOMETRY</i>	6.86	gm/dL	6.20 - 8.00
ALBUMIN: SERUM <i>by BROMOCRESOL GREEN</i>	4.55	gm/dL	3.50 - 5.50
GLOBULIN: SERUM <i>by CALCULATED, SPECTROPHOTOMETRY</i>	2.31	gm/dL	2.30 - 3.50
A : G RATIO: SERUM <i>by CALCULATED, SPECTROPHOTOMETRY</i>	1.97	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
INTRAHEPATIC CHOLESTASIS	> 1.5
HEPATOCELLULAR CARCINOMA & CHRONIC HEPATITIS	> 1.3 (Slightly Increased)




 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. RAJNI	PATIENT ID	: 1687604
AGE/ GENDER	: 30 YRS/FEMALE	REG. NO./LAB NO.	: 012412010037
COLLECTED BY	:	REGISTRATION DATE	: 01/Dec/2024 12:37 PM
REFERRED BY	:	COLLECTION DATE	: 01/Dec/2024 12:48PM
BARCODE NO.	: 01521805	REPORTING DATE	: 01/Dec/2024 02:45PM
CLIENT CODE.	: KOS DIAGNOSTIC LAB		
CLIENT ADDRESS	: 6349/1, NICHOLSON ROAD, AMBALA CANTT		

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


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. RAJNI	PATIENT ID	: 1687604
AGE/ GENDER	: 30 YRS/FEMALE	REG. NO./LAB NO.	: 012412010037
COLLECTED BY	:	REGISTRATION DATE	: 01/Dec/2024 12:37 PM
REFERRED BY	:	COLLECTION DATE	: 01/Dec/2024 12:48PM
BARCODE NO.	: 01521805	REPORTING DATE	: 01/Dec/2024 02:45PM
CLIENT CODE.	: KOS DIAGNOSTIC LAB		
CLIENT ADDRESS	: 6349/1, NICHOLSON ROAD, AMBALA CANTT		

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

KIDNEY FUNCTION TEST (COMPLETE)

UREA: SERUM <i>by UREASE - GLUTAMATE DEHYDROGENASE (GLDH)</i>	18.81	mg/dL	10.00 - 50.00
CREATININE: SERUM <i>by ENZYMATIC, SPECTROPHOTOMETRY</i>	0.91	mg/dL	0.40 - 1.20
BLOOD UREA NITROGEN (BUN): SERUM <i>by CALCULATED, SPECTROPHOTOMETRY</i>	8.79	mg/dL	7.0 - 25.0
BLOOD UREA NITROGEN (BUN)/CREATININE RATIO: SERUM <i>by CALCULATED, SPECTROPHOTOMETRY</i>	9.66^L	RATIO	10.0 - 20.0
UREA/CREATININE RATIO: SERUM <i>by CALCULATED, SPECTROPHOTOMETRY</i>	20.67	RATIO	
URIC ACID: SERUM <i>by URICASE - OXIDASE PEROXIDASE</i>	2.52	mg/dL	2.50 - 6.80
CALCIUM: SERUM <i>by ARSENAZO III, SPECTROPHOTOMETRY</i>	9.49	mg/dL	8.50 - 10.60
PHOSPHOROUS: SERUM <i>by PHOSPHOMOLYBDATE, SPECTROPHOTOMETRY</i>	2.98	mg/dL	2.30 - 4.70

ELECTROLYTES

SODIUM: SERUM <i>by ISE (ION SELECTIVE ELECTRODE)</i>	139.3	mmol/L	135.0 - 150.0
POTASSIUM: SERUM <i>by ISE (ION SELECTIVE ELECTRODE)</i>	4.21	mmol/L	3.50 - 5.00
CHLORIDE: SERUM <i>by ISE (ION SELECTIVE ELECTRODE)</i>	104.48	mmol/L	90.0 - 110.0

ESTIMATED GLOMERULAR FILTRATION RATE

ESTIMATED GLOMERULAR FILTRATION RATE (eGFR): SERUM <i>by CALCULATED</i>	87
--	----

INTERPRETATION:

To differentiate between pre- and post renal azotemia.

INCREASED RATIO (>20:1) WITH NORMAL CREATININE:

1. Prerenal azotemia (BUN rises without increase in creatinine) e.g. heart failure, salt depletion, dehydration, blood loss) due to decreased glomerular filtration rate.
2. Catabolic states with increased tissue breakdown.
3. GI haemorrhage.




 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. RAJNI	PATIENT ID	: 1687604
AGE/ GENDER	: 30 YRS/FEMALE	REG. NO./LAB NO.	: 012412010037
COLLECTED BY	:	REGISTRATION DATE	: 01/Dec/2024 12:37 PM
REFERRED BY	:	COLLECTION DATE	: 01/Dec/2024 12:48PM
BARCODE NO.	: 01521805	REPORTING DATE	: 01/Dec/2024 02:45PM
CLIENT CODE.	: KOS DIAGNOSTIC LAB		
CLIENT ADDRESS	: 6349/1, NICHOLSON ROAD, AMBALA CANTT		

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

- High protein intake.
- Impaired renal function plus
- Excess protein intake or production or tissue breakdown (e.g. infection, GI bleeding, thyrotoxicosis, Cushing's syndrome, high protein diet, burns, surgery, cachexia, high fever).
- Urine reabsorption (e.g. ureter colostomy)
- Reduced muscle mass (subnormal creatinine production)
- Certain drugs (e.g. tetracycline, glucocorticoids)

INCREASED RATIO (>20:1) WITH ELEVATED CREATININE LEVELS:

- Postrenal azotemia (BUN rises disproportionately more than creatinine) (e.g. obstructive uropathy).
- Prerenal azotemia superimposed on renal disease.

DECREASED RATIO (<10:1) WITH DECREASED BUN :

- Acute tubular necrosis.
- Low protein diet and starvation.
- Severe liver disease.
- Other causes of decreased urea synthesis.
- Repeated dialysis (urea rather than creatinine diffuses out of extracellular fluid).
- Inherited hyperammonemias (urea is virtually absent in blood).
- SIADH (syndrome of inappropriate antidiuretic hormone) due to tubular secretion of urea.
- Pregnancy.

DECREASED RATIO (<10:1) WITH INCREASED CREATININE:

- Phenacimide therapy (accelerates conversion of creatine to creatinine).
- Rhabdomyolysis (releases muscle creatinine).
- Muscular patients who develop renal failure.


INAPPROPRIATE RATIO:


- Diabetic ketoacidosis (acetoacetate causes false increase in creatinine with certain methodologies, resulting in normal ratio when dehydration should produce an increased BUN/creatinine ratio).
- Cephalosporin therapy (interferes with creatinine measurement).

ESTIMATED GLOMERULAR FILTRATION RATE:

CKD STAGE	DESCRIPTION	GFR (mL/min/1.73m2)	ASSOCIATED FINDINGS
G1	Normal kidney function	>90	No proteinuria
G2	Kidney damage with normal or high GFR	>90	Presence of Protein , Albumin or cast in urine
G3a	Mild decrease in GFR	60 -89	
G3b	Moderate decrease in GFR	30-59	
G4	Severe decrease in GFR	15-29	
G5	Kidney failure	<15	




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. RAJNI	PATIENT ID	: 1687604
AGE/ GENDER	: 30 YRS/FEMALE	REG. NO./LAB NO.	: 012412010037
COLLECTED BY	:	REGISTRATION DATE	: 01/Dec/2024 12:37 PM
REFERRED BY	:	COLLECTION DATE	: 01/Dec/2024 12:48PM
BARCODE NO.	: 01521805	REPORTING DATE	: 01/Dec/2024 02:45PM
CLIENT CODE.	: KOS DIAGNOSTIC LAB		
CLIENT ADDRESS	: 6349/1, NICHOLSON ROAD, AMBALA CANTT		

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


COMMENTS:

1. Estimated Glomerular filtration rate (eGFR) is the sum of filtration rates in all functioning nephrons and so an estimation of the GFR provides a measure of functioning nephrons of the kidney.
2. eGFR calculated using the 2009 CKD-EPI creatinine equation and GFR category reported as per KDIGO guideline 2012
3. In patients, with eGFR creatinine between 45-59 ml/min/1.73 m² (G3) and without any marker of Kidney damage, It is recommended to measure eGFR with Cystatin C for confirmation of CKD
4. eGFR category G1 OR G2 does not fulfill the criteria for CKD, in the absence of evidence of Kidney Damage
5. In a suspected case of Acute Kidney Injury (AKI), measurement of eGFR should be done after 48-96 hours of any Intervention or procedure
6. eGFR calculated by Serum Creatinine may be less accurate due to certain factors like Race, Muscle Mass, Diet, Certain Drugs. In such cases, eGFR should be calculated using Serum Cystatin C
7. **A decrease in eGFR implies either progressive renal disease, or a reversible process causing decreased nephron function (eg, severe dehydration).**

ADVICE:

KDIGO guideline, 2012 recommends Chronic Kidney Disease (CKD) should be classified based on cause, eGFR category and Albuminuria (ACR) category. GFR & ACR category combined together reflect risk of progression and helps Clinician to identify the individual who are progressing at more rapid rate than anticipated




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. RAJNI
AGE/ GENDER : 30 YRS/FEMALE
COLLECTED BY :
REFERRED BY :
BARCODE NO. : 01521805
CLIENT CODE. : KOS DIAGNOSTIC LAB
CLIENT ADDRESS : 6349/1, NICHOLSON ROAD, AMBALA CANTT

PATIENT ID : 1687604
REG. NO./LAB NO. : 012412010037
REGISTRATION DATE : 01/Dec/2024 12:37 PM
COLLECTION DATE : 01/Dec/2024 12:48PM
REPORTING DATE : 01/Dec/2024 02:04PM

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

ENDOCRINOLOGY

THYROID FUNCTION TEST: TOTAL

TRIIODOTHYRONINE (T3): SERUM by CMIA (CHEMILUMINESCENT MICROPARTICLE IMMUNOASSAY)	0.786	ng/mL	0.35 - 1.93
THYROXINE (T4): SERUM by CMIA (CHEMILUMINESCENT MICROPARTICLE IMMUNOASSAY)	7.09	µg/dL	4.87 - 12.60
THYROID STIMULATING HORMONE (TSH): SERUM by CMIA (CHEMILUMINESCENT MICROPARTICLE IMMUNOASSAY)	1.357	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 (e.g.: 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	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




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. RAJNI	PATIENT ID	: 1687604
AGE/ GENDER	: 30 YRS/FEMALE	REG. NO./LAB NO.	: 012412010037
COLLECTED BY	:	REGISTRATION DATE	: 01/Dec/2024 12:37 PM
REFERRED BY	:	COLLECTION DATE	: 01/Dec/2024 12:48PM
BARCODE NO.	: 01521805	REPORTING DATE	: 01/Dec/2024 02:04PM
CLIENT CODE.	: KOS DIAGNOSTIC LAB		
CLIENT ADDRESS	: 6349/1, NICHOLSON ROAD, AMBALA CANTT		

Test Name	Value	Unit	Biological Reference interval
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, 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




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. RAJNI	PATIENT ID	: 1687604
AGE/ GENDER	: 30 YRS/FEMALE	REG. NO./LAB NO.	: 012412010037
COLLECTED BY	:	REGISTRATION DATE	: 01/Dec/2024 12:37 PM
REFERRED BY	:	COLLECTION DATE	: 01/Dec/2024 12:48PM
BARCODE NO.	: 01521805	REPORTING DATE	: 01/Dec/2024 02:04PM
CLIENT CODE.	: KOS DIAGNOSTIC LAB		
CLIENT ADDRESS	: 6349/1, NICHOLSON ROAD, AMBALA CANTT		

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

PROLACTIN

PROLACTIN: SERUM	13.02	ng/mL	3 - 25
------------------	-------	-------	--------

by CMIA (CHEMILUMINESCENT MICROPARTICLE IMMUNOASSAY)

INTERPRETATION:

1. Prolactin is secreted by the anterior pituitary gland and controlled by the hypothalamus.
 2. The major chemical controlling prolactin secretion is dopamine, which inhibits prolactin secretion from the pituitary.
 3. Physiological function of prolactin is the stimulation of milk production. In normal individuals, the prolactin level rises in response to physiologic stimuli such as sleep, exercise, nipple stimulation, sexual intercourse, hypoglycemia, postpartum period, and also is elevated in the newborn infant.

INCREASED (HYPERPROLACTEMIA):

1. Prolactin-secreting pituitary adenoma (prolactinoma, which is 5 times more frequent in females than males).
 2. Functional and organic disease of the hypothalamus.
 3. Primary hypothyroidism.
 4. Section compression of the pituitary stalk.
 5. Chest wall lesions and renal failure.
 6. Ectopic tumors.
 7. DRUGS:- Anti-Dopaminergic drugs like antipsychotic drugs, anti-nausea/antiemetic drugs, Drugs that affect CNS serotonin metabolism, serotonin receptors, or serotonin reuptake (anti-depressants of all classes, ergot derivatives, some illegal drugs such as cannabis), Antihypertensive drugs, Opiates, High doses of estrogen or progesterone, anticonvulsants (valproic acid), anti-tuberculous medications (Isoniazid).

SIGNIFICANCE:

1. In loss of libido, galactorrhea, oligomenorrhea or amenorrhea, and infertility in premenopausal females.
 2. Loss of libido, impotence, infertility, and hypogonadism in males. Postmenopausal and premenopausal women, as well as men, can also suffer from decreased muscle mass and osteoporosis.
 3. In males, prolactin levels >13 ng/mL are indicative of hyperprolactinemia.
 4. In women, prolactin levels >27 ng/mL in the absence of pregnancy and postpartum lactation are indicative of hyperprolactinemia.
 5. Clear symptoms and signs of hyperprolactinemia are often absent in patients with serum prolactin levels <100 ng/mL.
 4. Mild to moderately increased levels of serum prolactin are not a reliable guide for determining whether a prolactin-producing pituitary adenoma is present, 5. Whereas levels >250 ng/mL are usually associated with a prolactin-secreting tumor.

CAUTION:

Prolactin values that exceed the reference values may be due to macroprolactin (prolactin bound to immunoglobulin). Macroprolactin should be evaluated if signs and symptoms of hyperprolactinemia are absent, or pituitary imaging studies are not informative.





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. RAJNI	PATIENT ID	: 1687604
AGE/ GENDER	: 30 YRS/FEMALE	REG. NO./LAB NO.	: 012412010037
COLLECTED BY	:	REGISTRATION DATE	: 01/Dec/2024 12:37 PM
REFERRED BY	:	COLLECTION DATE	: 01/Dec/2024 12:48PM
BARCODE NO.	: 01521805	REPORTING DATE	: 01/Dec/2024 03:28PM
CLIENT CODE.	: KOS DIAGNOSTIC LAB		
CLIENT ADDRESS	: 6349/1, NICHOLSON ROAD, AMBALA CANTT		

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

ANTI MULLERIAN HORMONE (AMH) GEN II

ANTI MULLERIAN HORMONE (AMH) GEN II: SERUM 3.31 ng/mL 0.05 - 11.00
 by ECLIA (ELECTROCHEMILUMINESCENCE IMMUNOASSAY)

INTERPRETATION:-

A Correlation of FERTILITY POTENTIAL and AMH levels are :

OVARIAN FERTILITY POTENTIAL	AMH VALUES IN (ng/mL)
OPTIMAL FERTILITY:	4.00 – 6.80 ng/mL
SATISFACTORY FERTILITY:	2.20 – 4.00 ng/mL
LOW FERTILITY:	0.30 – 2.20 ng/mL
VERY LOW/UNDETECTABLE:	0.00 – 0.30 ng/mL
HIGH LEVEL:	>6.8 ng/mL (PCOD/GRANULOSA CELL TUMOUR)

Anti Mullerian Hormone (AMH) is also known as Mullerian Inhibiting Substance provided by sertoli cells of the testis in males and by ovarian granulosa cells in females upto antral stage in females.

IN MALES:

1.It is used to evaluate testicular presence and function in infants with intersex conditions or ambiguous genitalia, and to distinguish between cryptorchidism and anorchia in males


IN FEMALES:


- During reproductive age, follicular AMH production begins during the primary stage, peaks in preantral stage & has influence on follicular sensitivity to FSH which is important in selection for follicular dominance. AMH levels thus represents the pool or number of primordial follicles but not the quality of oocytes. AMH does not vary significantly during menstrual cycle & hence can be measured independently of day of cycle.
- Polycystic ovarian syndrome can elevate AMH 2 to 5 fold higher than age specific reference range & predict anovulatory, irregular cycles, ovarian tumours like Granulosa cell tumour are often associated with higher AMH levels.
- Obese women are often associated with diminished ovarian reserve and can have 65% lower mean AMH levels than non-obese women.
- In females, AMH levels do not change significantly throughout the menstrual cycle and decrease with age.
- Assess Ovarian Reserve - correlates with the number of antral follicles in the ovaries.
- Evaluate fertility potential and ovarian response in IVF - Women with low AMH levels are more likely to be poor ovarian responders.
- Assess the condition of Polycystic Ovary and premature ovarian failure.

A combination of Age, Ultrasound markers-Ovarian Volume and Antral Follicle Count, AMH and FSH levels are useful for optimal assessment of ovarian reserve. Studies in various fertility clinics are ongoing to establish optimal AMH concentration for predicting response to invitro fertilization, however, given below is suggested interpretative reference.

AMH levels (ng/mL)	Suggested patient	Anticipated Antral	Anticipated FSH levels	Anticipated Response
--------------------	-------------------	--------------------	------------------------	----------------------




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. RAJNI	PATIENT ID	: 1687604
AGE/ GENDER	: 30 YRS/FEMALE	REG. NO./LAB NO.	: 012412010037
COLLECTED BY	:	REGISTRATION DATE	: 01/Dec/2024 12:37 PM
REFERRED BY	:	COLLECTION DATE	: 01/Dec/2024 12:48PM
BARCODE NO.	: 01521805	REPORTING DATE	: 01/Dec/2024 03:28PM
CLIENT CODE.	: KOS DIAGNOSTIC LAB		
CLIENT ADDRESS	: 6349/1, NICHOLSON ROAD, AMBALA CANTT		

Test Name	Value	Unit	Biological Reference interval
	Categorization for fertility based on AMH for age group (20 to 45 yrs)	Follicle counts	(day 3) to IVF/COH cycle
Below 0.3	Very low	Below 4	Above 20 Negligible/Poor
0.3 to 2.19	Low	4 - 10	Usually 16 - 20 Reduced
2.19 to 4.00	Satisfactory	11 - 25	Within reference range or between 11 - 15 Safe/Normal
Above 4.00	Optimal	Upto 30 and Above	Within reference range or between 11 - 15 or Above 15 Possibly Excessive

INCREASED:

1. Polycystic ovarian syndrome (most common)
2. Ovarian Tumour: Granulosa cell tumour

DECREASED:

1. Anorchia , Abnormal or absence of testis in males
2. Pseudohermaphroditism
3. Post Menopause

NOTE:

1. AMH measurement alone is seldom sufficient for diagnosis and results should be interpreted in the light of clinical finding and other relevant test such as ovarian ultrasonography (In fertility applications); abdominal or testicular ultrasound (intersex or testicular function applications); measurement of sex steroids (estradiol, Progesterone, Testosterone), FSH, Inhibin B (For fertility), and Inhibin A and B (for tumour work up).
2. Conversion of AMH from ng/mL to pmol/L can be performed by using equation $1 \text{ ng/mL} = 7.14 \text{ pmol/L}$




 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. RAJNI	PATIENT ID	: 1687604
AGE/ GENDER	: 30 YRS/FEMALE	REG. NO./LAB NO.	: 012412010037
COLLECTED BY	:	REGISTRATION DATE	: 01/Dec/2024 12:37 PM
REFERRED BY	:	COLLECTION DATE	: 01/Dec/2024 12:48PM
BARCODE NO.	: 01521805	REPORTING DATE	: 01/Dec/2024 02:04PM
CLIENT CODE.	: KOS DIAGNOSTIC LAB		
CLIENT ADDRESS	: 6349/1, NICHOLSON ROAD, AMBALA CANTT		

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

IMMUNOPATHOLOGY/SEROLOGY

HEPATITIS C VIRUS (HCV) ANTIBODY: TOTAL

HEPATITIS C ANTIBODY (HCV) TOTAL: SERUM	0.09	S/CO	NEGATIVE: < 1.00
by CMIA (CHEMILUMINESCENT MICROPARTICLE IMMUNOASSAY)			POSITIVE: > 1.00
HEPATITIS C ANTIBODY (HCV) TOTAL RESULT	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:


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

NOTE:

- False positive results are seen in Auto-immune disease, Rheumatoid Factor, HYpergammaglobulinemia, Paraproteinemia, Passive antibody transfer, Anti-idiotypes and Anti-superoxide dismutase.
- False negative results are seen in early Acute infection, Immunosuppression and Immuno— incompetence.
- HCV-RNA PCR recommended in all reactive results to differentiate between past and present infection.




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. RAJNI	PATIENT ID	: 1687604
AGE/ GENDER	: 30 YRS/FEMALE	REG. NO./LAB NO.	: 012412010037
COLLECTED BY	:	REGISTRATION DATE	: 01/Dec/2024 12:37 PM
REFERRED BY	:	COLLECTION DATE	: 01/Dec/2024 12:48PM
BARCODE NO.	: 01521805	REPORTING DATE	: 01/Dec/2024 02:04PM
CLIENT CODE.	: KOS DIAGNOSTIC LAB		
CLIENT ADDRESS	: 6349/1, NICHOLSON ROAD, AMBALA CANTT		

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

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

HIV 1/2 AND P24 ANTIGEN: SERUM	0.08	S/CO	NEGATIVE: < 1.00 POSITIVE: > 1.00
by CMIA (CHEMILUMINESCENT MICROPARTICLE IMMUNOASSAY)			
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 means 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.




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. RAJNI
AGE/ GENDER : 30 YRS/FEMALE
COLLECTED BY :
REFERRED BY :
BARCODE NO. : 01521805
CLIENT CODE. : KOS DIAGNOSTIC LAB
CLIENT ADDRESS : 6349/1, NICHOLSON ROAD, AMBALA CANTT

PATIENT ID : 1687604
REG. NO./LAB NO. : 012412010037
REGISTRATION DATE : 01/Dec/2024 12:37 PM
COLLECTION DATE : 01/Dec/2024 12:48PM
REPORTING DATE : 01/Dec/2024 02:04PM

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

HEPATITIS B SURFACE ANTIGEN (HBsAg) ULTRA

HEPATITIS B SURFACE ANTIGEN (HBsAg): 0.3 S/CO
SERUM
by CMIA (CHEMILUMINESCENT MICROPARTICLE IMMUNOASSAY)
NEGATIVE: < 1.0
POSITIVE: > 1.0

HEPATITIS B SURFACE ANTIGEN (HBsAg) NON REACTIVE
RESULT
by CMIA (CHEMILUMINESCENT MICROPARTICLE IMMUNOASSAY)

INTERPRETATION:

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 symptoms. Persistence of HBsAg for more than 6 months indicates carrier state or Chronic Liver disease.



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. RAJNI	PATIENT ID	: 1687604
AGE/ GENDER	: 30 YRS/FEMALE	REG. NO./LAB NO.	: 012412010037
COLLECTED BY	:	REGISTRATION DATE	: 01/Dec/2024 12:37 PM
REFERRED BY	:	COLLECTION DATE	: 01/Dec/2024 12:48PM
BARCODE NO.	: 01521805	REPORTING DATE	: 02/Dec/2024 07:16AM
CLIENT CODE.	: KOS DIAGNOSTIC LAB		
CLIENT ADDRESS	: 6349/1, NICHOLSON ROAD, AMBALA CANTT		

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

RUBELLA ANTIBODIES EVALUATION IgG AND IgM

RUBELLA ANTIBODIES IgM <i>by CLIA (CHEMILUMINESCENCE IMMUNOASSAY)</i>	0.475	IU/mL	NEGATIVE: < 2.0 EQUIVOCAL: 2.0 - 3.0 POSITIVE: > 3.0
RUBELLA ANTIBODIES IgG <i>by CLIA (CHEMILUMINESCENCE IMMUNOASSAY)</i>	9.586 ^H	IU/mL	NEGATIVE: < 2.0 POSITIVE: > 2.0

INTERPRETATION:

Rubella virus, the only member of rubivirus genus, causes rubella (also known as german measles), an acute exanthematous infection of children and adults. The clinical illness is characterized by rash, fever and lymphadenopathy and can resemble a mild case of measles. The virus also cause arthralgias and occasional encephalitis. Infection is particularly disastrous if contracted during the first 4 months of pregnancy. If not immunologically protected, women infected during pregnancy run a high risk of embryo-foetal damage. Congenital Rubella causes a wide range of severe defects in foetus, including cataract, deafness, hepatosplenomegaly, psychomotor retardation, bone alterations, cardiopathies, neuropathies and diabetes.

TEST UTILITY:

1. IgM antibodies become detectable in a few days after the onset of signs and symptoms and reach peak level in 7 – 10 days. These antibodies persist, but rapidly diminishes in concentration over the next 4 – 5 weeks until the antibody is no longer clinically detectable. While the presence of IgM antibodies suggests current or recent infection, low levels of IgM antibodies may occasionally persist for more than 12 months post-infection or immunization. The presence of IgM antibodies in a new born indicates that the baby was infected during pregnancy because the mother IgM antibodies do not pass to the baby through umbilical cord.
2. Rubella IgG antibody can be formed following rubella infection or after rubella vaccination. A reactive result is consistent with immune status to rubella virus. The presence of IgG antibodies, but not IgM antibodies, in a newborn means that the mothers IgG antibodies have passed to the baby in utero and these antibodies may protect the infant from rubella infection during the initial six months of life.

LIMITATIONS:

1. Rubella IgM test results are intended as an aid to the diagnose of active or recent infection. They should however, be interpreted in conjugation with other clinical findings and diagnostic procedures
2. The antibody titre of a single serum specimen cannot be used to determine recent infection. Specimens obtained too early, or too late, during the course of infection, may not demonstrate detectable levels of IgM antibody. Samples collected too early may not have detectable levels of IgG. Paired samples (acute & convalescent) should be collected and tested concurrently to demonstrate seroconversion.
3. A positive Rubella IgM result may not always indicate a primary acute infection, as IgM has a tendency to persist, even at high levels, after primary infection. **FALSE POSITIVE RESULTS MAY ALSO OCCUR DUE TO RHEUMATOID FACTOR AND ANTI-NUCLEUR ANTIBODIES.** Hence, IgG avidity testing is recommended to differentiate between primary infection, IgM persistence and reactivation. IgG antibody results should be interpreted in conjugation with clinical evaluation and the results of other diagnostic procedures.




 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. RAJNI	PATIENT ID	: 1687604
AGE/ GENDER	: 30 YRS/FEMALE	REG. NO./LAB NO.	: 012412010037
COLLECTED BY	:	REGISTRATION DATE	: 01/Dec/2024 12:37 PM
REFERRED BY	:	COLLECTION DATE	: 01/Dec/2024 12:48PM
BARCODE NO.	: 01521805	REPORTING DATE	: 01/Dec/2024 01:23PM
CLIENT CODE.	: KOS DIAGNOSTIC LAB		
CLIENT ADDRESS	: 6349/1, NICHOLSON ROAD, AMBALA CANTT		

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

VDRL

VDRL	NON REACTIVE	NON REACTIVE
------	--------------	--------------

by IMMUNOCHROMATOGRAPHY

INTERPRETATION:

- Does not become positive until 7 - 10 days after appearance of chancre.
- High titer (>1:16) - active disease.**
- Low titer (<1:8) - biological falsepositive test in 90% cases or due to late or late latent syphilis.**
- Treatment of primary syphilis causes progressive decline tonegative VDRL within 2 years.
- Rising titer (4X) indicates relapse, reinfection, or treatment failure and need for retreatment.
- May benonreactive in early primary, late latent, and late syphilis (approx. 25% of cases).
- 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 OCCUR IN:


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


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

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

*** End Of Report ***




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

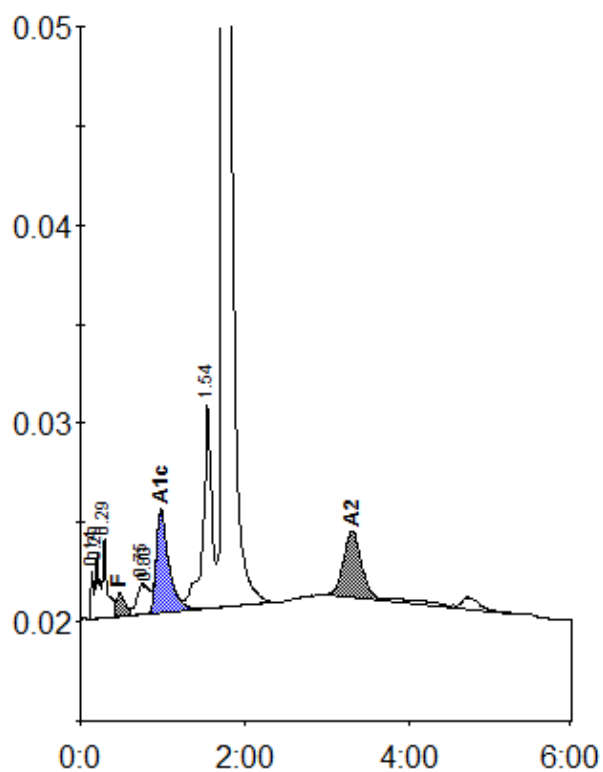

 DR. YUGAM CHOPRA
 CONSULTANT PATHOLOGIST
 MBBS, MD (PATHOLOGY)



Patient report

Bio-Rad
D-10
S/N: #DJ6F040603
Sample ID:
Injection date
Injection #: 29
Rack #: ---

DATE: 12/02/2024
TIME: 05:45 AM
Software version: 4.30-2
01521805
12/02/2024 03:43 AM
Method: HbA2/F
Rack position: 10



Peak table - ID: 01521805

Peak	R.time	Height	Area	Area %
Unknown	0.14	2511	5154	0.3
A1a	0.20	3189	12253	0.8
A1b	0.29	4059	14705	0.9
F	0.48	1175	9267	< 0.8 *
LA1c/CHb-1	0.75	1563	8350	0.5
LA1c/CHb-2	0.80	1433	10300	0.7
A1c	0.98	5151	55110	5.0
P3	1.54	10293	75991	4.9
A0	1.74	306586	1319891	84.5
A2	3.30	3347	50867	3.6
Total Area:		1561888		

Concentration:	%
F	< 0.8 *
A1c	5.0
A2	3.6