



Lab No. : BAR/25-02-2023/SR7338809
Patient Name : RUMKI SARKAR MONDAL
Age : 37 Y 5 M 8 D
Gender : F

Lab Add. : Newtown, Kolkata-700156
Ref Dr. : Dr.MEDICAL OFFICER
Collection Date: 25/Feb/2023 10:08AM
Report Date : 25/Feb/2023 02:33PM



Test Name	Result	Unit	Bio Ref. Interval	Method
UREA,BLOOD , GEL SERUM	30.0	mg/dL	19-49 mg/dL	Urease with GLDH
THYROID PANEL (T3, T4, TSH) , GEL SERUM				
T3-TOTAL (TRI IODOTHYRONINE)	0.91	ng/ml	0.60-1.81 ng/ml	CLIA
T4-TOTAL (THYROXINE)	7.1	µg/dL	3.2-12.6 µg/dL	CLIA
TSH (THYROID STIMULATING HORMONE)	1.24	µIU/mL	0.55-4.78 µIU/mL	CLIA

Serum TSH levels exhibit a diurnal variation with the peak occurring during the night and the nadir, which approximates to 50% of the peak value, occurring between 1000 and 1600 hours.[1,2]

References:

- Bugalho MJ, Domingues RS, Pinto AC, Garrao A, Catarino AL, Ferreira T, Limbert E and Sobrinho L. Detection of thyroglobulin mRNA transcripts in peripheral blood of individuals with and without thyroid glands: evidence for thyroglobulin expression by blood cells. *Eur J Endocrinol* 2001;145:409-13.
- Bellantone R, Lombardi CP, Bossola M, Ferrante A, Princi P, Boscherini M et al. Validity of thyroglobulin mRNA assay in peripheral blood of postoperative thyroid carcinoma patients in predicting tumor recurrence varies according to the histologic type: results of a prospective study. *Cancer* 2001;92:2273-9.

BIOLOGICAL REFERENCE INTERVAL: [ONLY FOR PREGNANT MOTHERS]

Trimester specific TSH LEVELS during pregnancy:

FIRST TRIMESTER: 0.10 – 3.00 µ IU/mL

SECOND TRIMESTER: 0.20 -3.50 µ IU/mL

THIRD TRIMESTER : 0.30 -3.50 µ IU/mL

References:

- Erik K. Alexander, Elizabeth N. Pearce, Gregory A. Brent, Rosalind S. Brown, Herbert Chen, Chrysoula Dosiou, William A. Grobman, Peter Laurberg, John H. Lazarus, Susan J. Mandel, Robin P. Peeters, and Scott Sullivan. *Thyroid*. Mar 2017.315-389. <http://doi.org/10.1089/thy.2016.0457>
- Kalra S, Agarwal S, Aggarwal R, Ranabir S. Trimester-specific thyroid-stimulating hormone: An indian perspective. *Indian J Endocr Metab* 2018;22:1-4.

POTASSIUM, BLOOD , GEL SERUM

POTASSIUM,BLOOD 3.90 mEq/L 3.5-5.5 mEq/L ISE INDIRECT

PHOSPHORUS-INORGANIC, BLOOD , GEL SERUM

PHOSPHORUS-INORGANIC,BLOOD 3.9 mg/dL 2.4-5.1 mg/dL Phosphomolybdate/UV

SODIUM, BLOOD , GEL SERUM

SODIUM,BLOOD 140.00 mEq/L 132 - 146 mEq/L ISE INDIRECT




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*CHLORIDE, BLOOD , .			
CHLORIDE,BLOOD	106.00	mEq/L	99-109 mEq/L ISE INDIRECT
CREATININE, BLOOD			
	0.73	mg/dL	0.5-1.1 mg/dL Jaffe, alkaline picrate, kinetic
GLUCOSE, FASTING , BLOOD, NAF PLASMA			
GLUCOSE,FASTING	100	mg/dL	Impaired Fasting-100-125 ~Diabetes- >= 126.~Fasting is defined as no caloric intake for at least 8 hours. Gluc Oxidase Trinder

In the absence of unequivocal hyperglycemia, diagnosis requires two abnormal test results from the same sample or in two separate test samples.

Reference :
ADA Standards of Medical Care in Diabetes – 2020. Diabetes Care Volume 43, Supplement 1.

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Dr NEEPA CHOWDHURY
MBBS MD (Biochemistry)
Consultant Biochemist



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LIPID PROFILE , GEL SERUM

CHOLESTEROL-TOTAL	222.00	mg/dL	Desirable: < 200 mg/dL Borderline high: 200-239 mg/dL High: > or =240 mg/dL	Enzymatic
TRIGLYCERIDES	85.00	mg/dL	Normal:: < 150, BorderlineHigh::150-199, High:: 200-499, VeryHigh::>500	GPO-Trinder
HDL CHOLESTEROL	46.00	mg/dl	< 40 - Low 40-59- Optimum 60 - High	Elimination/catalase
LDL CHOLESTEROL DIRECT	172.0	mg/dL	OPTIMAL : <100 mg/dL, Near optimal/ above optimal : 100-129 mg/dL, Borderline high : 130-159 mg/dL, High : 160-189 mg/dL, Very high : >=190 mg/dL	Elimination / Catalase
VLDL	4	mg/dl	< 40 mg/dl	Calculated
CHOL HDL Ratio	4.8		LOW RISK 3.3-4.4 AVERAGE RISK 4.47-7.1 MODERATE RISK 7.1-11.0 HIGH RISK >11.0	Calculated

Reference: National Cholesterol Education Program. Executive summary of the third report of The National Cholesterol Education Program (NCEP) Expert Panel on detection, evaluation, and treatment of high blood cholesterol in adults (Adult Treatment Panel III). JAMA. May 16 2001;285(19):2486-97.

Dr. SUPARBA CHAKRABARTI
MBBS, MD(BIOCHEMISTRY)
Consultant Biochemist



Lab No. : SR7338809 Name : RUMKI SARKAR MONDAL Age/G : 37 Y 5 M 8 D / F Date : 25-02-2023

CBC WITH PLATELET (THROMBOCYTE) COUNT , EDTA WHOLE BLOOD

HEMOGLOBIN	11.9	g/dL	12 - 15	PHOTOMETRIC
WBC	6.8	*10 ³ /μL	4 - 10	DC detection method
RBC	4.26	*10 ⁶ /μL	3.8 - 4.8	DC detection method
PLATELET (THROMBOCYTE) COUNT	150	*10 ³ /μL	150 - 450*10 ³ /μL	DC detection method/Microscopy

DIFFERENTIAL COUNT

NEUTROPHILS	60	%	40 - 80 %	Flowcytometry/Microscopy
LYMPHOCYTES	32	%	20 - 40 %	Flowcytometry/Microscopy
MONOCYTES	06	%	2 - 10 %	Flowcytometry/Microscopy
EOSINOPHILS	02	%	1 - 6 %	Flowcytometry/Microscopy
BASOPHILS	00	%	0-0.9%	Flowcytometry/Microscopy

CBC SUBGROUP

HEMATOCRIT / PCV	36.0	%	36 - 46 %	Calculated
MCV	84.5	fl	83 - 101 fl	Calculated
MCH	27.9	pg	27 - 32 pg	Calculated
MCHC	33.0	gm/dl	31.5-34.5 gm/dl	Calculated
RDW - RED CELL DISTRIBUTION WIDTH	16.6	%	11.6-14%	Calculated
PDW-PLATELET DISTRIBUTION WIDTH	28.4	fL	8.3 - 25 fL	Calculated
MPV-MEAN PLATELET VOLUME	13.1		7.5 - 11.5 fl	Calculated

Mansu Gulati

Dr Mansi Gulati
Consultant Pathologist
MBBS, MD, DNB (Pathology)



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BLOOD GROUP ABO+RH [GEL METHOD] , EDTA WHOLE BLOOD

ABO	O	Gel Card
RH	POSITIVE	Gel Card

TECHNOLOGY USED: GEL METHOD

ADVANTAGES :

- Gel card allows simultaneous forward and reverse grouping.
- Card is scanned and record is preserved for future reference.
- Allows identification of Bombay blood group.
- Daily quality controls are run allowing accurate monitoring.

Historical records check not performed.

ESR (ERYTHROCYTE SEDIMENTATION RATE) , EDTA WHOLE BLOOD

1stHour	14	mm/hr	0.00 - 20.00 mm/hr	Westergren
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Dr. PANKTI PATEL
MBBS , MD (PATHOLOGY)
CONSULTANT PATHOLOGIST



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CALCIUM, BLOOD

CALCIUM,BLOOD 9.10 mg/dL 8.7-10.4 mg/dL Arsenazo III

TOTAL PROTEIN [BLOOD] ALB:GLO RATIO , .

TOTAL PROTEIN 6.80 g/dL 5.7-8.2 g/dL BIURET METHOD
 ALBUMIN 4.4 g/dL 3.2-4.8 g/dL BCG Dye Binding
 GLOBULIN 2.40 g/dl 1.8-3.2 g/dl Calculated
 AG Ratio 1.83 1.0 - 2.5 Calculated

URIC ACID, BLOOD , GEL SERUM

URIC ACID,BLOOD 6.10 mg/dL 2.6-6.0 mg/dL Uricase/Peroxidase

GLUCOSE, PP , BLOOD, NAF PLASMA

GLUCOSE,PP 102 mg/dL Impaired Glucose Tolerance-140 to 199. Diabetes>= 200. Gluc Oxidase Trinder

The test should be performed as described by the WHO, using a glucose load containing the equivalent of 75-g anhydrous glucose dissolved in water. In the absence of unequivocal hyperglycemia, diagnosis requires two abnormal test results from the same sample or in two separate test samples.

Reference : ADA Standards of Medical Care in Diabetes – 2020. Diabetes Care Volume 43, Supplement 1.

[PDF Attached](#)

GLYCATED HAEMOGLOBIN (HBA1C) , EDTA WHOLE BLOOD

GLYCATED HEMOGLOBIN (HBA1C) 5.7 % ***FOR BIOLOGICAL REFERENCE INTERVAL DETAILS , PLEASE REFER TO THE BELOW MENTIONED REMARKS/NOTE WITH ADDITIONAL CLINICAL INFORMATION ***

HbA1c (IFCC) 39.0 mmol/mol HPLC

Clinical Information and Laboratory clinical interpretation on Biological Reference Interval:

Low risk / Normal / non-diabetic : <5.7% (NGSP) / < 39 mmol/mol (IFCC)
 Pre-diabetes/High risk of Diabetes : 5.7%- 6.4% (NGSP) / 39 - < 48 mmol/mol (IFCC)
 Diabetics-HbA1c level : >= 6.5% (NGSP) / > 48 mmol/mol (IFCC)

Analyzer used : Bio-Rad-VARIANT TURBO 2.0

Method : HPLC Cation Exchange

Recommendations for glycemic targets

- Ø Patients should use self-monitoring of blood glucose (SMBG) and HbA1c levels to assess glycemic control.
- Ø The timing and frequency of SMBG should be tailored based on patients' individual treatment, needs, and goals.
- Ø Patients should undergo HbA1c testing at least twice a year if they are meeting treatment goals and have stable glycemic control.
- Ø If a patient changes treatment plans or does not meet his or her glycemic goals, HbA1c testing should be done quarterly.
- Ø **For most adults who are not pregnant, HbA1c levels should be <7% to help reduce microvascular complications and macrovascular disease . Action suggested >8% as it indicates poor control.**
- Ø Some patients may benefit from HbA1c goals that are stringent.

Result alterations in the estimation has been established in many circumstances, such as after acute/ chronic blood loss, for example, after surgery, blood transfusions, hemolytic anemia, or high erythrocyte turnover; vitamin B₁₂/ folate deficiency, presence of chronic renal or liver disease; after administration of high-dose vitamin E / C; or erythropoietin treatment.

Reference: Glycated hemoglobin monitoring BMJ 2006; 333;586-8

References:



Suraksha
DIAGNOSTICS

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1. Chamberlain JJ, Rhinehart AS, Shaefer CF, et al. Diagnosis and management of diabetes: synopsis of the 2016 American Diabetes Association Standards of Medical Care in Diabetes. *Ann Intern Med.* Published online 1 March 2016. doi:10.7326/M15-3016.
2. Mosca A, Goodall I, Hoshino T, Jeppsson JO, John WG, Little RR, Miedema K, Myers GL, Reinauer H, Sacks DB, Weykamp CW. International Federation of Clinical Chemistry and Laboratory Medicine, IFCC Scientific Division. Global standardization of glycosylated hemoglobin measurement: the position of the IFCC Working Group. *Clin Chem Lab Med.* 2007;45(8):1077-1080.

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DR. ANANNYA GHOSH
MBBS, MD (Biochemistry)
Consultant Biochemist

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DEPARTMENT OF CARDIOLOGY
REPORT OF E.C.G.

DATA

HEART RATE	:	83 bpm
PR INTERVAL	:	102 ms
QRS DURATION	:	84 ms
QT INTERVAL	:	334 ms
QTC INTERVAL	:	393 ms

AXIS

P WAVE	:	90 degree
QRS WAVE	:	63 degree
T WAVE	:	19 degree

IMPRESSION :

Sinus rhythm.
Normal ECG.

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ACRay

Dr. A C RAY
Department of Non-invasive
Cardiology

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Lab Add. :
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Report Date : 25/Feb/2023 04:45PM



ECHO CARDIOGRAPHY- PLAIN

M MODE DATA :

PARAMETER	TEST VALUE	NORMAL RANGE
Aortic root diameter	3.14	2.0 - 4.0cm
Left atrial diameter	3.14	2.0 - 4.0cm
RV internal diameter	1.61	0.6 - 2.3cm
IV septal thickness (diastole)	1.08	0.60 - 1.10cm
LV internal diameter (diastole)	4.31	3.50 - 5.60cm
Post wall thickness (diastole)	0.94	0.60 - 1.10cm
LV internal diameter (systole)	2.87	2.40 - 4.20cm
LV Ejection fraction	62 %	55 - 75%

1) Left Ventricle :

Cavity size and wall thickness: Within normal limits.

LV wall motion study : No regional wall motion abnormality.

Systolic function : Good.

Diastolic compliance : **Adequate**

2) Left Atrium :

Normal size, no mass in the appendage / body.

3) Right Ventricle and Right Atrium :

Normal size, good RV systolic function.

4) Mitral Valve :

Normal leaflets, good excursion, normal subvalvar apparatus.

Atrial regurgitation.

5) Aortic Valve :

Three cusps- no thickening, good systolic excursion.

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No significant regurgitation noted.

6) Tricuspid Valve :

Normal leaflets, normal sized annulus, no significant regurgitation.

7) Pulmonary Valve :

Normal cusps, good systolic excursion.

8) Ventricular Septum :

Intact.

9) Inter atrial septum :

Intact.

10) Pericardium :

No thickening, no effusion.

11) Others :

No intra-cardiac mass.

CONCLUSION :

Good left ventricular systolic function with adequate diastolic compliance.

No pulmonary arterial hypertension.

ACRay

Dr. A C RAY

Department of Non-invasive
Cardiology

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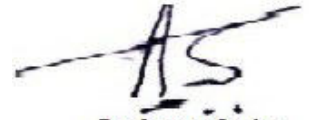
X-RAY REPORT OF CHEST (PA)

FINDINGS :

No active lung parenchymal lesion is seen.
Both the hila are normal in size, density and position.
Mediastinum is in central position. Trachea is in midline.
Domes of diaphragm are smoothly outlined. Position is within normal limits.
Lateral costo-phrenic angles are clear.
The cardio-thoracic ratio is normal.
Bony thorax reveals no definite abnormality.

IMPRESSION :

Normal study.


Dr. Anoop Sastry
MBBS, DMRT(CAL)
CONSULTANT RADIOLOGIST
Registration No.: WB-36628

Patient Data

Sample ID: C02135002373
 Patient ID: SR7338809
 Name:
 Physician:
 Sex:
 DOB:

Analysis Data

Analysis Performed: 25/FEB/2023 14:22:24
 Injection Number: 4961U
 Run Number: 106
 Rack ID: 0002
 Tube Number: 3
 Report Generated: 25/FEB/2023 14:45:46
 Operator ID: ASIT

Comments:

Peak Name	NGSP %	Area %	Retention Time (min)	Peak Area
A1a	---	1.0	0.154	18191
A1b	---	1.0	0.212	18175
F	---	0.6	0.264	12237
LA1c	---	1.8	0.387	34838
A1c	5.7	---	0.488	88104
P3	---	3.5	0.779	66629
P4	---	1.2	0.857	23024
Ao	---	86.2	0.991	1633455

Total Area: 1,894,653

HbA1c (NGSP) = 5.7 % HbA1c (IFCC) = 39 mmol/mol

