To:	**Mauli Childrens Hospital And Maternity Home-Aurangabad** Opp Gajanan Mandir,Beside Malkapur Bank, Pudling Nagar Road, Grkheda Parisar Maharashtra Aurangabad - 431001 Contact: **Report Of: Mrs. DR PRATIKSHA JAIN** Pt. Contact: 7276473733

Sample ID	2400207149
Patient ID	10024100031
Collected on	13/11/2024
Received on	14/11/2024 16:37
Registered on	14/11/2024 18:22
Reported on	15/11/2024 13:42
Referred by	**Dr. Archana Patil**

Hemoglobinopathy Screening

Patient Name: Mrs. DR PRATIKSHA JAIN
Sample Type: Whole Blood EDTA
Date of Birth/Age: 05/11/1993
Gender: FEMALE
City: Aurangabad
Method: High Performance Liquid Chromatography (HPLC)
Blood Transfusion History: No
Referral Reason or Clinical History:

About the test

Hemoglobinopathy screening by high performance liquid chromatography is a blood test that is used for detecting quantitative and qualitative abnormalities of hemoglobin (Hb), namely, Thalassemia and Structural Hb variants (e.g. HbS) respectively. The test helps identify individuals with these disorders so that they can receive timely and appropriate treatment and care. Antenatal diagnosis of these disorders allows measures to reduce the chances of the birth of an affected baby. It is also possible to screen the newborns for hemoglobinopathies using this approach, thereby decreasing the mortality & morbidity associated with conditions like Sickle cell disorder.

Test findings

Hb Fraction	Observed Value (%)	Expected Value (%)
HbF	0.3%	<2%
P2*	3.5%	<4.6%
HbA0	87.1%	85 - 95%
HbA2/HbE	2.9%	1.8 - 3.5%
HbD	Absent	Absent
HbS	Absent	Absent

Interpretation

Chromatogram shows normal hemoglobin pattern.
Hemoglobin and RBC parameters are normal.

Verified by
Mr. Pradip Kadam
Incharge Biochemistry

Dr.Suresh Bhanushali MD (Path),
Consultant Pathologist

Patient Name : Mrs. DR PRATIKSHA JAIN | Sample ID : 2400207149

HPLC Findings

A2 Concentration = 2.9 %

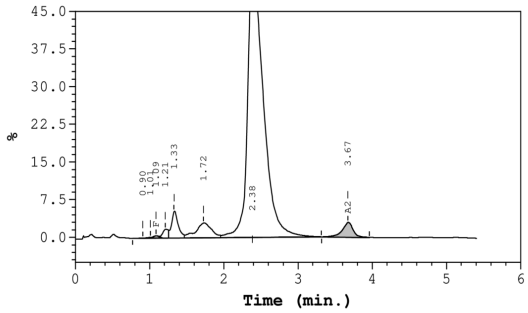
Patient Data
Sample ID: 2400207149
Patient ID:
Name:
Physician:
Sex:
DOB:
Comments:

Analysis Data
Analysis Performed: 11/14/2024 22:38:16
Injection Number: 9124
Run Number: 596
Rack ID: 0004
Tube Number: 10
Report Generated: 11/14/2024 22:46:04
Operator ID:

Analysis comments:

Peak Name	Calibrated Area %	Area %	Retention Time (min)	Peak Area
P1	---	0.0	0.90	660
Unknown	---	0.1	1.01	2258
F	0.3	---	1.09	7868
Unknown	---	1.0	1.21	27768
P2	---	3.5	1.33	92456
P3	---	4.7	1.72	123713
Ao	---	87.1	2.38	2305484
A2	2.9	---	3.67	86314

Total Area: 2,646,521



F Concentration = 0.3 %
A2 Concentration = 2.9 %

Important Blood Indices (from CBC Analysis)

Parameters	Result	Reference Range	Units
Hemoglobin (Hb)	12.88	12 - 15	g/dL
RBC Count	3.96	3.8 - 4.8	x 10^6/µL
Hematocrit	39.70	36 - 46	%
Mean Corpuscular Volume (MCV)	100.20	83 - 101	fL
Mean Corpuscular Hb (MCH)	32.50 ⚠	27 - 32	pg
Mean Corpuscular Hb Conc. (MCHC)	32.40	31.5 - 34.5	g/dL
RBC Distribution Width (RDW) (CV)	13.30	11.6 - 14	%
RBC Distribution Width (RDW) (SD)	45.50	39 - 46	fL

Notes:

1. Recent blood transfusions and iron deficiency can interfere with the results, repeat testing is recommended three months after the last blood transfusion. In case of iron deficiency, it is recommended to evaluate the result post-correction of iron deficiency.
2. Megaloblastic anemia can cause elevated HbA2 levels. A repeat assay is recommended after correction of VitB12 deficiency.
3. Mild to moderately elevated fetal hemoglobin (HbF) values are observed during pregnancy, hypoxia, chronic kidney disease, use of certain drugs,myelodysplastic syndromes (MDS), aplastic anemia and conditions of stress hemopoiesis.
4. Cases with borderline HbA2 levels (3.1-3.9%) could represent Silent Beta-thalassemia trait, or co-existent iron deficiency or Alpha-thalassemia in a case of Beta-thalassemia trait. They need to be investigated further by appropriate tests.
5. Confirmatory molecular tests for Beta-thalassemia traits and abnormal hemoglobin disorders (e.g. HbS, HbE, and HbD), followed by subsequent prenatal diagnosis (If required) are available at our centre.
6. The mentioned P2 value from BioRad Variant-II HPLC system is equivalent of HbA1c value in BioRad D10 system

Disclaimers:

1. The Hb-HPLC is a screening test that detects Beta-thalassemia and other hemoglobin variants. It does not identify Alpha-thalassemia and Silent Beta-thal-assemia carriers. DNA analysis is recommended to rule out Alpha-thalassemia and Silent Beta-thalassemia carriers.
2. The result must be interpreted in conjunction with the complete blood counts (CBC), VitB12 and iron profile of the individual.
3. Each sample received at Lilac Insights' processing centre is handled with the utmost sensitivity and care. All samples received on Sundays and National holidays are stored as per specific guidelines for the respective specimens and processed on the next day.
4. P2 peak in Bio Rad's Variant II HPLC platform represents glycated hemoglobin. It is elevated in uncontrolled diabetes.

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