To: **Vedansha Hospital-Nagpur**
Vedansha Hospital,High Court Road,Surendra Nagar,
Maharashtra
Nagpur - 440015
Contact:
Report Of: Mrs. PRIYA DEAGADE
Pt. Contact: 1000000000

Sample ID	2200153892
Patient ID	1002332585
Received on	03/06/2023 09:34
Registered on	03/06/2023 09:34
Reported on	03/06/2023 18:05
Referred by	**Dr. SANGEETA TAJPURIYA**

Hemoglobinopathy Screening

Patient Name: Mrs. PRIYA DEAGADE
Sample Type: Whole Blood EDTA
Date of Birth/Age: 28/08/1994
Gender: FEMALE
City: NAGPUR
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*	5.5% ⚠	<4.6%
HbA0	85.9%	85 - 95%
HbA2/HbE	2.5%	1.8 - 3.5%
HbD	Absent	Absent
HbS	Absent	Absent

*The mentioned P2 value from BioRad Variant-II HPLC system is equivalent of HbA1c value in BioRad D10 system

⚠ Indicates that the individual requires further evaluation and opinion from the clinician.

Interpretation

Chromatogram shows normal hemoglobin pattern.
Hb and PCV are reduced. However, the rest of the red cell parameters are essentially normal.

Suggestions

Please correlate clinically.

Verified by
Mr. Pradip Kadam
Incharge Biochemistry

Dr. A. Dasgupta MD, PhD,
Consultant Hematopathologist

Patient Name : Mrs. PRIYA DEAGADE	Sample ID : 2200153892

HPLC Findings

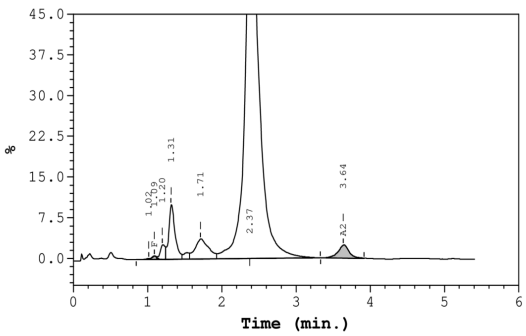
Patient Data

Sample ID: 2200153892
Patient ID:
Name:
Physician:
Sex:
DOB:
Comments:

Analysis Data

Analysis Performed: 06/02/2023 13:04:54
Injection Number: 2325U
Run Number: 228
Rack ID: 0010
Tube Number: 10
Report Generated: 06/02/2023 13:12:54
Operator ID:

Analysis comments:



Peak Name	Calibrated Area %	Area %	Retention Time (min)	Peak Area
Unknown	---	0.1	1.02	1832
F	0.3	---	1.09	6414
Unknown	---	1.2	1.20	26339
P2	---	5.5	1.31	115713
P3	---	4.6	1.71	96281
Ao	---	85.9	2.37	1813187
A2	2.5	---	3.64	52162

Total Area: 2,111,928

F Concentration = 0.3 %
A2 Concentration = 2.5 %

Important Blood Indices (from CBC Analysis)

Parameters	Result	Reference Range	Units
Hemoglobin (Hb)	11.10 ⚠	12 - 15	g/dL
RBC Count	3.82	3.8 - 4.8	x 10^6/µL
Hematocrit	34.00 ⚠	36 - 46	%
Mean Corpuscular Volume (MCV)	89.10	83 - 101	fL
Mean Corpuscular Hb (MCH)	29.10	27 - 32	pg
Mean Corpuscular Hb Conc. (MCHC)	32.60	31.5 - 34.5	g/dL
RBC Distribution Width (RDW) (CV)	16.70 ⚠	11.6 - 14	%
RBC Distribution Width (RDW) (SD)	55.80 ⚠	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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