To: **Chordiya Nursing Home-Pune**
Suvarna Nagari, First Floor,
Salave Garden,Gangadham-Shatrunjay Mandir Road
Maharashtra
Pune - 411048
Contact:
Report Of: Mrs. HANWATE SUREKHA TANAJI
Pt. Contact:

Sample ID	2301007130
Patient ID	1002356127
Collected on	13/07/2023
Received on	19/07/2023 17:25
Registered on	19/07/2023 15:20
Reported on	22/07/2023 18:07
Referred by	**DR.PRAVEEN CHORDIYA**

Hemoglobinopathy Screening

Patient Name: Mrs. HANWATE SUREKHA TANAJI
Sample Type: Whole Blood EDTA
Date of Birth/Age: 09/01/1991
Gender: FEMALE
City: PUNE
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	0.5%	<2%
P2*	4.0%	<4.6%
HbA0	86.4%	85 - 95%
HbA2/HbE	2.6%	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

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. HANWATE SUREKHA TANAJI | Sample ID : 2301007130

HPLC Findings

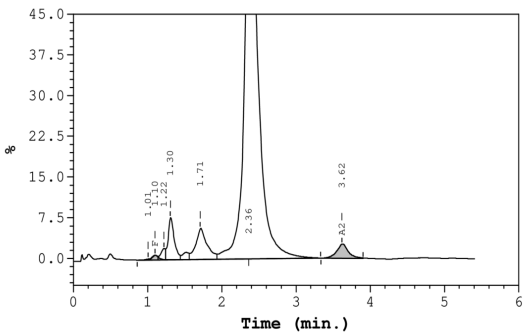
Patient Data
Sample ID: 2301007130
Patient ID:
Name:
Physician:
Sex:
DOB:
Comments:

Analysis Data
Analysis Performed: 07/18/2023 16:00:04
Injection Number: 3940
Run Number: 320
Rack ID: 0003
Tube Number: 3
Report Generated: 07/18/2023 16:06:39
Operator ID:

Analysis comments:

Peak Name	Calibrated Area %	Area %	Retention Time (min)	Peak Area
Unknown	---	0.1	1.01	1404
F	0.5	---	1.10	9822
Unknown	---	0.9	1.22	16365
P2	---	4.0	1.30	76383
P3	---	5.6	1.71	107118
Ao	---	86.4	2.36	1655715
A2	2.6	---	3.62	49836

Total Area: 1,916,642



F Concentration = 0.5 %
A2 Concentration = 2.6 %

Important Blood Indices (from CBC Analysis)

Parameters	Result	Reference Range	Units
Hemoglobin (Hb)	10.22 ⚠	12 - 15	g/dL
RBC Count	3.94	3.8 - 4.8	x 10^6/µL
Hematocrit	30.00 ⚠	36 - 46	%
Mean Corpuscular Volume (MCV)	76.20 ⚠	83 - 101	fL
Mean Corpuscular Hb (MCH)	25.90 ⚠	27 - 32	pg
Mean Corpuscular Hb Conc. (MCHC)	34.10	31.5 - 34.5	g/dL
RBC Distribution Width (RDW) (CV)	18.40 ⚠	11.6 - 14	%
RBC Distribution Width (RDW) (SD)	48.50 ⚠	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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