HbA1C- Glycated Haemoglobin, blood by HPLC method

(EDTA Whole Blood)

Investigation	Observed Value	Unit	Biological Reference Interval
HbA1C- Glycated Haemoglobin (HPLC)	**5.8**	%	Non-diabetic: <= 5.6 Pre-diabetic: 5.7-6.4 Diabetic: >= 6.5 Refer interpretation for monitoring ranges.
Estimated Average Glucose (eAG)	119.76	mg/dL	

Interpretation & Remark:

1. HbA1c is used for monitoring diabetic control. It reflects the estimated average glucose (eAG).
2. HbA1c has been endorsed by clinical groups & ADA (American Diabetes Association) guidelines 2017, for diagnosis of diabetes using a cut-off point of 6.5%.
3. Trends in HbA1c are a better indicator of diabetic control than a solitary test.
4. Low glycated haemoglobin(below 4%) in a non-diabetic individual are often associated with systemic inflammatory diseases, chronic anaemia(especially severe iron deficiency & haemolytic), chronic renal failure and liver diseases. Clinical correlation suggested.
5. To estimate the eAG from the HbA1C value, the following equation is used: eAG(mg/dl) = 28.7*A1c-46.7
6. Interference of Haemoglobinopathies in HbA1c estimation.
   A. For HbF > 25%, an alternate platform (Fructosamine) is recommended for testing of HbA1c.
   B. Homozygous hemoglobinopathy is detected, fructosamine is recommended for monitoring diabetic status
   C. Heterozygous state detected (D10/ Tosho G8 is corrected for HbS and HbC trait).
7. **In known diabetic patients, following values can be considered as a tool for monitoring the glycemic control.**
   Excellent Control - 6 to 7 %,
   Fair to Good Control - 7 to 8 %,
   Unsatisfactory Control - 8 to 10 %
   and Poor Control - More than 10 % .

Note : Hemoglobin electrophoresis (HPLC method) is recommended for detecting hemoglobinopathy.

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Investigation	Observed Value	Unit	Biological Reference Interval
Glucose, Fasting & Post Lunch Package			
Glucose fasting (Plasma-F,Hexokinase)	96	mg/dL	Normal: 70-100 Impaired Fasting Glucose(IFG): 100-125 Diabetes mellitus: >= 126 (on more than one occassion) (American diabetes association guidelines 2019)
Glucose post prandial (Plasma - P,Hexokinase)	135	mg/dL	Normal: 70-140 Impaired Tolerance: 140-199 Diabetes mellitus: >= 200 (on more than one occassion) (American diabetes association guidelines 2018)

An individual may show higher fasting glucose level in comparison to post prandial glucose level due to following reasons :
The glycaemic index and response to food consumed, Changes in body composition, Increased insulin response and sensitivity, Alimentary hypoglycemia, Renal glycosuria, Effect of oral hypoglycaemics & Insulin treatment.

-- End of Report --

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