2 Hours Postprandial – [Serum] Analysis

Objective

The objective of this test is to measure the blood glucose level two hours after the ingestion of a meal, providing an assessment of the body's ability to metabolize glucose. This analysis is commonly used in the diagnosis and monitoring of diabetes mellitus and glucose intolerance.

Materials and Methods

Materials:
- Patient blood sample (serum)
- Glucose testing reagents and analyzer
- Standard laboratory equipment (centrifuge, pipettes, collection tubes)

Methods:
1. Patient Preparation: Ensure the patient consumes a standardized meal or oral glucose load.
2. Sample Collection: Draw blood exactly two hours post meal and separate serum via centrifugation.
3. Glucose Measurement: Analyze serum glucose concentration using enzymatic (glucose oxidase) or hexokinase method.
4. Quality Control: Use standard controls to validate the accuracy of results.
5. Interpretation: Compare measured glucose values to reference ranges to assess glucose tolerance or diagnose diabetes.

Results

- Normal 2-hour postprandial glucose: < 140 mg/dL (7.8 mmol/L)
- Impaired glucose tolerance: 140–199 mg/dL (7.8–11.0 mmol/L)
- Diabetes mellitus: ≥ 200 mg/dL (11.1 mmol/L)

Conclusion

The 2-hour postprandial serum glucose test is a valuable diagnostic tool for identifying abnormal glucose metabolism. It helps in diagnosing diabetes and monitoring therapeutic interventions in diabetic patients.