Lactic Dehydrogenase (LDH) Test

- Measures LDH levels to detect tissue damage, including that of the liver.

Lactate dehydrogenase (LDH) is an enzyme found in nearly all tissues of the body. Elevated levels of LDH in the bloodstream can be associated with various conditions, including liver disease, anemia, myocardial infarction, bone fractures, muscle injuries, malignancies, and infections such as encephalitis and meningitis, as well as HIV. LDH serves as a non-specific indicator of tissue turnover, a normal metabolic function. Numerous cancers can lead to an overall rise in LDH levels or an increase in specific isozymes.[1] Consequently, it may act as a non-specific tumor marker, lacking utility in determining the specific type of cancer. Due to its non-specific nature and the general unavailability of routine isozyme testing in clinical settings, LDH measurements often yield incomplete data, necessitating the use of alternative assays such as creatine kinase (CK) for muscle damage, alanine aminotransferase (ALT) for liver function, and troponin for cardiac conditions.[2] Moreover, the activity of LDH can be influenced by hemolysis of the blood sample. Since red blood cells (RBCs) contain their own LDH, hemolysis can lead to an artificial increase in LDH levels, resulting in misleadingly high readings.[3] Additionally, any form of cellular necrosis may elevate serum LDH concentrations, and its widespread presence in various tissues limits its effectiveness as a clinical biomarker.

References

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