

Abnormal Laboratory Reports: Check Before Releasing It

DIVENDU BHUSHAN¹, RAHUL SHUKLA², MALA MAHTO³

Viral hepatitis is a common entity characterised by rise in transaminases levels biochemically. It has a characteristic course where these enzymes rises, form a plateau, and then gradually fall. Serum bilirubin follow the curve little later. There are instances where sudden change in enzymes level can confuse the physician. Here we are describing a case where reports of liver enzymes varied markedly in 24 hour. A young male patient was admitted with fever, nausea, severe body ache and headache from two days. We investigated for malaria, dengue, and typhoid. All investigations were negative except his AST and ALT was 100 and 368 IU/L. On second day these levels raised to 2589 and 389 IU/L respectively. His total bilirubin was 2.3 mg%. We started symptomatic treatment for hepatitis and sent all viral markers. On third day his AST and ALT were 2.8 and 503 u/L. We got suspicious and contacted our clinical laboratory in charge. We also reviewed the literature from a company who manufacture the kit with reagent, and found it can be due to substrate depletion [1].

Here, we estimated AST level by enzymatic method with RX suzuka analysers. There are two reagents in this process: R1: tris buffer, L aspartate/MDH/LD and R2: α -oxoglutarate and NADH [2]. The reactions are following:



When the AST is too high, it consumes all reagent (oxoglutarate) and doesn't allow the reaction to complete. So the value picked by machine is too low. In these situations we should do the test in dilution and modify the final reports accordingly.

CONCLUSION

We emphasise on checking of the reports which are so much divergent from the normal range by the laboratory incharges and then communicate it with the clinical incharge of the patient. Although, clinician should also understand the shortcomings of each investigations. Only a mutual communication can solve the issue.

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PARTICULARS OF CONTRIBUTORS:

1. Assistant Professor, Department of General Medicine, All India Institute of Medical Sciences, Patna, Bihar, India.
2. Junior Resident, Department of General Medicine, All India Institute of Medical Sciences, Patna, Bihar, India.
3. Associate Professor, Department of Biochemistry, All India Institute of Medical Sciences, Patna, Bihar, India.

NAME, ADDRESS, E-MAIL ID OF THE CORRESPONDING AUTHOR:

Dr. Divendu Bhushan,
All India Institute of Medical Sciences, Patna, Bihar, India.
E-mail: drdivendubhushan@aiimspatna.org

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