Study of LDH and Uric Acid Levels in Pre Eclapmsia Women

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Abstract: Hypertension or preeclampsia is major complication begins after 20 weeks Of Pregnancy. it should be lead to foetal complications such as intra uterine growth retardation and preterm birth. 2. biochemical parameter such as Lactate dehydrogenase and uric acid should be detected. From the present study 60 samples are collected by comparing Control and patient sample. The level of uric acid and lactate dehydrogenase should be significantly elevated in hypertensive women's sample. Finally this study concluded the uric acid and lactate dehydrogenase is advisable parameters for early detection of preeclampsia.

Keywords: LDH -Lactate Dehdrogenase, IU/Litre -International Unit Per Litre

1. Introduction

Hypertension is common medical problem in pregnancy and important cause of maternal and foetal morbidity. Complicates at 15 percentage of pregnancy. It is a potentially dangerous pregnancy complication. hypertension or preeclampsia begins after 20 weeks Of Pregnancy in women it should be lead to foetal complications. During pregnancy many physiological state associated with many alterations in metabolic and Biochemical and immunological process. Hypertension during pregnancy is a major health problem it complicates 15 to 20 pregnancy s in India it strongly associated with foetal growth retardation and prematurity. Lactate dehydrogenase (LDH) is an intra cellular enzyme responsible for inter conversion of pyruvate in the cells. Preeclampsia is an multi system disorder may cause cellular deaths so the LDH inside the cells may released and increase the concentration. So LDH is used to determine the extended cellular death and there by the sevearity of disease. LDH mostly used to measure and evaluate the cell death it mainly found in muscle, brain, blood cells, and lungs so it gives an idea for maternal and Foetal hemorrhage. Uric acid (2, 6, 8 - trihydroxypurine) is the end product of purine metabolism. Serum uric acid levels are typically elevated in HDP. It islikely to result from reduced uric acid clearance from diminished glomerularfiltration, increased tubular reabsorption and decreased secretion. Another possibility is increased placental urate production compensatory to increased oxidative stress and formation of reactive oxygen species (ROS) have been proposed as another contributing source of hyperuricemia noted in Pregnancy induced hypertension (PIH) apart from renal dysfunction. Uric acid has deleterious effects on endothelium, oxidative metabolism and platelets. Serum uric acid levels increase very early at 10th week of gestation in patients who later develop preeclampsia. Hypertension is the most common medical problem encountered in pregnancy and remains an important cause of maternal and fetal morbidity and mortality. It complicates up to 15% of pregnancies. The review was intended to assess the prognostic significance of the value of serum LDH and used as a marker of preeclampsia. Higher serum LDH and uric acid level associated with increased incidence of maternal complications like abruption placenta, HELLP syndrome etc. There was an increase in maternal morbidity with increasing serum levels. To conclude high serum LDH and uric acid levels have significant association with severity of disease and maternal outcomes in patient of preeclampsia and can be considered as a prognostic tool from early trimester.

2. Methods

The study was conducted the department of biochemistry. it is a retrospective study. Total 60 samples were collected and divided in to control and patients. Estimated parameters include LDH and URIC ACID. Estimation by using COBAS6000 C 501& E601 was used for the estimation of biochemical parameters. It is fully automated software controlled analyzer for clinical chemistry analysis. It is designed for both quantitative and qualitative in vitro quantitative determination of lactate dehydrogenase in human serum and plasma on Roche/Hitachi cobas c system.

Mean LDH Level in Patients and Control

3. Result

Sample



325.6666666 IU/LITRE

Uric Acid	Mean
Sample	6.5366666Mg/dl
Control	3.7466666Mg/dl

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Uric acid level in control and patients



4. Conclusion

In the present study found that serum uric acid levels and LDH levels where significantly higher in cases as compared to control group. Estimation of serum uric acid and serum lactate dehydrogenase is advisable in pregnancy for early detection and prevention of morbidity and mortality in mother as well as foetus. Hypertension is one of the common complication associated with pregnancy and contributes to the maternal and perinatal morbidity and mortality. Various traditional and newer biomarkers where suggested for diagnosis and prognosis of hypertensive disorder of pregnancy. In the present study found that significantly elevated levels of serum uric acid and lactate dehydrogenase level as compared to control. The mean of lactate dehydrogenase in case are 325.6666 and control are 195.66666. The mean value of uric level of cases are 6.53 and the control are 3.744444 when bases of value the hypertensive condition the significant increase of serum uric acid and lactate dehydrogenase so these are the best parameter to detect and diagnose the pre eclampsia condition

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