Severe HELLP Syndrome Following Eclampsia Caused Maternal Death: Report of a Case

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We aimed to report a case of severe HELLP syndrome that concluded by maternal death. Our case had very high level of LDH, ALT ,AST and very low level of thrombocyt. In conclusion, the most important biochemical markers for the maternal mortality in HELLP syndrome are high level of LDH, thrombocytopenia, high levels of ALT and AST, proteinuria and preorbital edema. The mortality cause of our case was intracranial hemorrhagea due to HELLP syndrome.

Key Words: Severe, HELLP, Maternal death, Intracranial hemorrhagea

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Introduction

Preeclampsia (PE); which affects 2% to 7% of healthy nulliparous and grand muliparous women, is a major cause of maternal and fetal morbidity and mortality.[1] Hemolysis, elevated liver enzymes, and low platelets (HELLP) occurs in 20% of severe PE and is seen in approximately 10% of pregnant women and 15% of women with preeclampsia-eclampsia. The pathogenesis of this complication is not clear. Involvement of the coagulation system is seen in HELLP patients, which is not present in PE patients without HELLP. Symptoms include malaise, right upper quadrant tenderness, nausea, vomiting, edema, relative or absolute hypertension, and a varying degree of proteinuria. In the cases who had HELLP syndrome can have complications as disseminated Intravascular coagulation (DIC) , acute renal failure (ARF) , decolman placenta, pulmonary edema, acute respiratory distress syndrome (ARDS) and liver rupture.[2]

Case Report

A 41-year-old multigravida (gravida: 8, parite: 7) with an intrauterine pregnancy at 31 weeks of pregnant woman referred to our clinic with general situation failure, tonic clonic seizures and hypertension. Her family reported that she had increasing edema on her hand and eyes in the last two months. She had never measured her tension and had no antenatal care. She had 6 times of tonic clonic seizures at home and applied to hospital with eclampsia diagnosis. We noted during her physical examination that; she was in coma, her pupillas were fixed dilated, stinking bilateral lower and upper extremity edema. Her vital signs were temperature 37.8 _C, blood pressure 160/120 mmHg, pulse 92 beats/min, respiratory rate 26/min. Initial laboratory values were WBC 18.6 K/UL, Hb 6.5 g/dl, Hct 24,9%, platelet 24.000 K/UL. Serum blood urea nitrogen 29 mg/dl, creatine 0.92mg/dl, potassium 3.7 mEq/l, aspartate aminotransferase 2219 U/l, alanin aminotransferase 1001 U/l,total bilurubine 4.2 mg/dl, lactic dehydrogenase 7007 U/l, albumin 1,97 g/dl. Protrombin time activated partial protrombin time and fibrinogen levels were prolonged and the case was in diseminin normal limits.Urinanalysis showed abundant proteinuria. Ultrasonography of abdomen was unremarkable. On obstetric ultrasound examination we found a 31 week of alive fetus. On computerized brain tomography we observed solid, homogeneously hyper dense image that commented as diffuse intracranial bleeding. We began i.v. magnesium sulphate (3 g/ h). Fetal heart tones were noted to be 136 bpm and having late descelerations.After the approval of the family, we performed cesarean section and she had a 1600 g, 1-3 apgar scores of a fetus.During her post operative clinical follow up, the bilirubin, blood urea nitrogen and creatinine values began to increase. Her general situation began to get worse and we entubated the case. On day 6 of the clinical follow she had cardiopulmonary arrest and died.

Discussion

HELLP syndrome represents a severe form of pre-eclampsia, eclampsia characterized by hemolysis, elevated liver enzymes, and low platelets. Endothelial dysfunction is considered central to themultiple-organpathophysiology of pre-eclampsia/eclampsia, and microangiopathic hemolysis, which suggests endothelial damage, is characteristic of HELLP syndrome. The reported incidence of HELLP syndrome in association with eclampsia ranges from 10.8% to 32.1%[3] HELLP

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syndrome is a variant of severe preeclampsia. Patients may present with a wide variety of signs and symptoms. The complete spectrum of HELLP syndrome is seen in approximately 10% of pregnant women and 15% of women with preeclampsia-eclampsia.[4] Mostly presentation of HELLP syndrome is after 34 weeks but may be diagnosed between 20 weeks of gestation to a few days after delivery. It is generally agreed that pregnancies complicated by preeclampsia and HELLP syndrome are at even higher risk for maternal and/or fetal complications. Factors contributing to the disease spectrum include the onset of vasospasm, activation of the coagulation system, oxidative stressors, increased inflammatory response, and ischemia.[5] In the literature there are several case reports on cerebral bleeding associated with the HELLP syndrome . Audibert et al. report cerebral bleeding to occur in 1.5% of the cases.[6] Contrary to this, in a highly selected group of 37 women with the HELLP syndrome that was transferred to an obstetric intensive care unit in Turkey, 15 women (40%) had cerebral hemorrhage. In this study CT and MRI were used as diagnostic tools.[7] The cause of mortality in our case was intracranial bleeding. Renal failure may occur due to damaged microcirculation in the kidneys or as a result of intravascular volume depletion secondary to leakage of plasma from the damaged systemic microcirculation. The intensive care management of patients with HELLP syndrome producing multiple organ system failure consists of careful monitoring with active and supportive treatment of any complications, as demonstrated in this case. There is significant maternal and fetal risk of morbidity and mortality associated with HELLP syndrome. Prompt diagnosis and appropriate treatment is crucial to optimize outcome. Patients with HELLP syndrome should be treated in tertiary care centers

Eklampsi Sonrası Gelişen ve Maternal Ölüme Neden Olan Ciddi Hellp Sendromu: Olgu Sunumu

Amacımız maternal ölümle sonuçlanan ciddi HELLP sendromlu olgunun sunulması. Olgumuzun çok yüksek LDH,ALT, AST ve çok düşük trombosit değerleri vardı. Sonuç olarak, HELLP sendromu'nda maternal mortaliteyi belirleyen en önemli biokimyasal markerlar yüksek düzeyli LDH, ALT,AST ve düşük düzeyli trombosit ile proteinüri ve ödemdir.Bizim olgumuzda ölüm nedeni intrakranial kanama idi.

Anahtar Kelimeler: Ciddi, HELLP, Maternal ölüm, İntrakaranial kanama

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