

中文題目：成功地使用葉克膜搶救併發 HELLP syndrome 的產後婦女

英文題目：Successful Use of Extracorporeal Membrane Oxygenation Postpartum as Rescue Therapy in a Woman with HELLP syndrome

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## Introduction

Extracorporeal membrane oxygenation (ECMO) has been used in respiratory system (VV-ECMO) or both respiratory and circulatory system (VA-ECMO) to support those organ functions. However, there were limited evidences and experiences about the use of ECMO in women during peripartum or postpartum. Even few case reports were reported after data survey of PubMed. We present a postpartum woman who suffered from HELLP syndrome experienced multiple organ failure and survived after ECMO and continuous renal replacement therapy (CRRT) support.

## Case presentation

A 29-year-old woman with gestational hypertension history complained about fever off and on for 1 day after Cesarean section (C/S). She was transferred to our MICU due to dyspnea, suspected heart failure and pneumonia. After admission, the blood examination showed decreased hemoglobin, platelet amount, and impaired liver function. The HELLP syndrome was suspected. We had kept supportive care for her vital sign, such as transfusion for anemia and empirical antibiotic use for suspected sepsis. Renal function was worsening soon after admission. In addition, rapid progression of dyspnea, suspected relative to pulmonary edema, was mentioned. Due to above, intubation was performed. However, poor PF ratio was noted and ARDS (adult respiratory distress syndrome) was highly suspected. CRRT (Continuous Renal Replacement Therapy) and VV-ECMO were kept for renal and respiratory systems. Nicardipine pump was also added on for hypertension crisis. Laboratory data about anti-phospholipid syndrome, ANA (antinuclear antibody), and Connective tissue disease (CTD) Autoantibody Screen tests showed negative. After 4 days course treatment, ECMO was weaning because of improvement of oxygenation status. Extubation was also done afterwards. After management, diastolic dysfunction and pulmonary hypertension were noted. Gradually weaning support of hemodialysis was done and she was follow-up in our cardiovascular outpatient department.

## Discussion

Some women experience health problems during pregnancy. These complications can involve the mother's health, the fetus's health, or both. HELLP syndrome is severe disease during last three months of pregnancy or shortly after childbirth occurring in 0.5 to 0.9% of all pregnancies and in 10–20% of cases with severe preeclampsia. It composes with hemolysis, elevated liver function and low platelet count (thrombocytopenia). Treatment of HELLP generally requires delivery of the baby immediate, especially after 34th gestational week or the fetal and/or maternal conditions deteriorate. However, 30% of the HELLP syndromes develop after birth; the majority within the first 48 hours. Those patients with post-partum HELLP syndrome, risk of renal failure and pulmonary o edema is significantly increased compared to those with an antenatal onset. The mainly treatments include blood transfusion, blood pressure control, MgSO<sub>4</sub>, and corticosteroid used and supportive care.

There were no formal guidelines to lead the doctors to management these patients with HEELP, much less to be with ECMO. Here we present a case complicated with HELLP syndrome after Cesarean delivery. Early management of renal failure and respiratory failure, including use of ECMO and CRRT, has given the good outcome for the patient after cataphoresis. Although the outcome of HELLP syndrome for mothers is generally good, but 1% death rate is still noted.