Electroconvulsive Therapy for Extreme Mania in Pregnancy

C-S Chen, S-L Lin, C-L Chang

ABSTRACT

Psychiatric disorders during pregnancy pose a great challenge. Both medications and maternal mental illness may have adverse effect on the fetus and the balance between risks and benefits of treatment strategy is crucial. Electroconvulsive therapy (ECT) is known to have few adverse effects and therefore it may be preferred. We report on a 31-year old pregnant woman at 36 weeks gestation, who had a history of bipolar I disorder and who was admitted for manic episode with psychotic features. Due to her persistent manic symptoms and consideration of the psychotropic drugs related teratogenic risks for the fetus, electroconvulsive therapy was recommended. The electroconvulsive therapy was administered three days after admission and improvement of disease condition was noted. The delivery was performed by Caesarean section, and no complication was reported. Electroconvulsive therapy use in psychiatric disorder during pregnancy is a relatively effective and safe treatment.

Keywords: Electroconvulsive therapy, manic episode, pregnancy.

Terapia Electroconvulsiva para las Manías Extremas en el Embarazo

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RESUMEN

Los trastornos psiquiátricos durante el embarazo representan un gran desafío. Tanto los medicamentos como las enfermedades mentales en la maternidad, pueden tener efectos adversos sobre el feto. El equilibrio entre riesgos y beneficios de la estrategia de tratamiento es crucial. Se sabe que la terapia electroconvulsiva (TEC) tiene pocos efectos adversos, y por lo tanto puede ser la preferida. Reportamos el caso de una embarazada de 31 años a las 36 semanas de gestación, con una historia de trastorno bipolar I. La paciente fue ingresada por un episodio maníaco con características psicóticas. Debido a sus persistentes síntomas maníacos y a la consideración de los riesgos teratogénicos relacionados con las drogas psicotrópicas para el feto, se recomendó la terapia electroconvulsiva. La terapia electroconvulsiva se administró 3 días después del ingreso y se observó una mejoría en la condición de la enfermedad. El parto se realizó mediante cesárea, y no se reportó ninguna complicación. El uso de la terapia electroconvulsiva para trastornos psiquiátricos durante el embarazo es un tratamiento relativamente seguro y eficaz.

Palabras claves: Terapia electroconvulsiva, episodio maníaco, embarazo

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INTRODUCTION

Psychiatric illnesses during pregnancy present treatment challenges. The physiological changes during pregnancy may increase the susceptibility of treatment of side effects for the mother (1), and some psychotropic drugs also pose various teratogenic risks for the baby (2). However, untreated psychiatric illness could lead to squealaes adverse effects for both mother and her baby. When the risks of untreated symptoms are extreme, the patient is known to be refractory to medications, or the medi-cation represents a substantial risk to the fetus, electroconvulsive therapy (ECT) represents a valuable alternative in the pregnant patient (3). The American Psychiatric Association practice guidelines suggest ECT as a primary treatment of major depression and bipolar disorder during pregnancy (4). We present a case of mature labour after one session of ECT.

CASE REPORT

A 31-year old pregnant woman at 36 weeks gestation was admitted to the hospital for acute mania with psychotic

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features. In the emergency room, the patient walked to and fro and showed hyper-talkativeness and a dishelved appearance. Besides, religious delusion and auditory hallucination were also noted. The laboratory tests were unremarkable except for normocytic anaemia (8.9 mg/dL), and no drugs or alcohol use was detected.

After admission, violent behaviours toward to staff occurred. Her violent behaviours also threatened the viability of fetus. Due to her persistent manic and psychotic symptoms. She would have needed large doses of sedatives but most psychotropics, benzodiazepines and mood stabilizers posed teratogenic risks and need a period of therapeutic time. Electroconvulsive therapy was chosen. An obstetric evaluation before the ECT procedure did not anticipate the risk of premature labour and did not recommend any tocolytics.

The ECT session was performed with bilateral electrode placements under a stimulus dose of 174.6 mC. Ventilation was applied through a nasal cannula during seizures and oxygenation of the patient was monitored. External fetal cardiac monitoring was performed during the procedure. No adverse effects were noted. The fetal monitoring was performed by obstetric consultations and ultrasonographic examinations. After a single ECT was done, elevated mood and psychomotor agitation were progressively improved. Then, we prescribed generic quetiapine 200 mg orally per night, and then generic quetiapine 50 mg per day as follow-up therapy.

The delivery was performed by Caesarean section on the 11th day. The baby was delivered at 38 weeks with a bodyweight of 3400 gm and was healthy. The baby remained healthy in the subsequent six months. The patient was stable on the generic quetiapine 100 mg per day at our outpatient department.

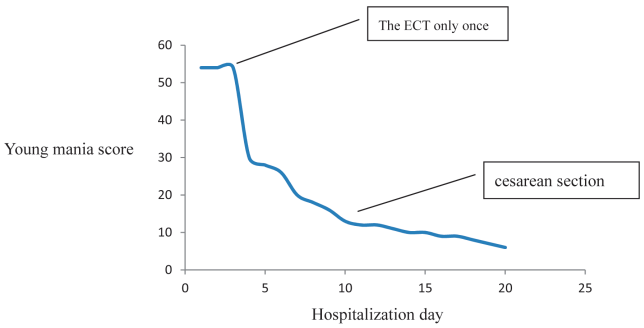

Fig. 1: The mania scores dropped dramatically after the only once electroconvulsive therapy.

DISCUSSION

Treatment of psychiatric disorders during pregnancy must avoid any harm to the fetus and keep adverse effects at a minimum level. Recurrence in bipolar disorders is frequent in pregnancy (5), and the prevalence is 23% during pregnancy and 52% during the postpartum period. Electroconvulsive therapy is effective in mania treatment. It is recommended in mania when there is high suicidal risk, history of good response to ECT/poor response to medications, patient's preference, risk of standard antimanic treatments outweighing risks of ECT, catatonia sustained agitation. Electroconvulsive therapy is a treatment option particularly when concerning about the teratogenic effects of medications (6).

Electroconvulsive therapy should be given in a hospital with facilities to manage fetal emergency (7). An obstetric consultation should be considered in high-risk patients (8). External fetal cardiac monitoring during the procedure is not obligatory since generally no alteration in fetal heart-rate has been observed.

Later in pregnancy, such as increase in the size and weight of the uterus, which may restrict ventilation when the patient is in the supine position, a conventional method is to elevate the patient's right-hip, thereby preventing the movement of the uterus, relieving pressure on the diaphragm (7). Ensuring sufficient hydration with adequate fluid intake or intravenous hydration with Ringer's lactate or normal saline before ECT treatment may reduce the risk of reduced placental perfusion. Numerous reports show the efficacy of ECT in all three trimesters of pregnancy.

Electroconvulsive therapy is considered as a relatively safe and effective treatment. No controlled studies were found about the rate of complications of ECT compared to other treatments during pregnancy (7). Besides, no alterations of fetal heart rate, fetal movement or uterine contraction during ECT have been reported (9).

The co-morbidity from continued illness and incompletely understood adverse effects of psychotropic drugs have increased the choice of ECT for pregnant patients with severe mental illness, especially when they have associated high-risk conditions. Some medications that have teratogenic risks during the first trimester include; benzodiazepines, antipsychotics, lithium and other mood stabilizers (10). Later in pregnancy, benzodiazepines are associated with neonatal hypotonia, apnoea, and temperature dysregulation. Trichloroacetic acid (TCA) treatment related anticholinergic effects and withdrawal symptoms in newborns have been reported. Lithium is associated with premature labour, neonatal hypothyroidism or lithium toxicity. In terms of teratogenic risk, ECT use in pregnancy is considered relatively safe.

In pregnancy with severe mood disorders or psychosis, antidepressants and antipsychotic drugs are usually not prescribed, especially during the first trimester of pregnancy due to the risk of congenital abnormalities. Therefore, electroconvulsive therapy may be considered an alternative treatment. In the second and third trimesters, ECT is recommended when poor response or intolerance to medication, deterioration in clinical course, and previous better response to ECT. Electroconvulsive therapy has been reported as a treatment with high efficacy and low-risk in the management of psychiatric disorders during all trimesters of pregnancy, as well as postpartum. Consequently, some complication should be monitored with obstetric consultation.

AUTHORS' NOTE

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