ECT in pregnancy: a review of the literature from 1941 to 2007

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CRD summary
The review examined the safety and efficacy of electroconvulsive therapy (ECT) during pregnancy. The authors concluded that although data were limited, ECT seemed an effective treatment of severe mental illness with low risks to mother and baby. Limitations in reporting of the review methods and reliance on case reports mean that these conclusions, although cautious, may not be reliable.

Authors' objectives
To review the safety and effectiveness of electroconvulsive therapy (ECT) during pregnancy for the treatment of severe mental illness.

Searching
PubMed and PsycINFO were searched for studies published since 1941; search terms were given in the review. The authors stated that websites, journal issues and book chapters were searched. Studies published in English or with English translations were eligible for inclusion.

Study selection
Case-reports of women who underwent ECT exclusively or in combination with other therapies during pregnancy were eligible for inclusion. Studies of therapy in which convulsions were triggered exclusively by a non-electroconvulsive means were excluded.

In the included studies, the women suffered from neurotic and/or psychotic illness. Where reported, the mean number of treatment courses was 10.7 (range one to 35) and treatment was administered between four weeks and nine months gestation.

The authors did not state how the papers were selected for the review.

Assessment of study quality
The authors did not state that they assessed validity.

Data extraction
The authors did not state how data were extracted for the review.

Methods of synthesis
The case reports were discussed in a narrative synthesis according to outcome.

Results of the review
Case reports were available for 339 patients. Efficacy data were reported for 68 patients. The proportion with at least partial response ranged from 61.1% among women with schizophrenia (n=18 patients) to 100% among women with schizoaffective disorder (n=3 patients). Partial response rates were 84% among 37 women with major depressive disorders/depression.

There were 25 cases on neonatal/foetal abnormalities, 11 of which were considered likely or possibly related to ECT. These included one foetal death secondary to status epilepticus, one miscarriage in the first trimester, eight cases of transient foetal arrhythmias and one instance of multiple interhemispheric infarction.

There were 20 women with complications, 18 of which were considered likely or possibly related to ECT. These included patients with status epilepticus, haematuria, uterine contractions and/or preterm labour, vaginal bleeding, abdominal pain and placental abruption.
Authors’ conclusions
Although data were limited, it seemed that ECT was an effective treatment for severe mental illness during pregnancy and that risks to mother and baby were low.

CRD commentary
The review addressed a clear research question. Participant, intervention and study design criteria were clear. No inclusion criteria were applied to outcomes.

The search covered two key databases; insufficient details of the rest of the search were provided to allow an assessment of how comprehensive it was. As only English-language studies or English translations were eligible for inclusion, it was likely that the results were affected by language bias. It appeared that validity was not assessed and no details of methods for study selection and data extraction were given, so the possibility of errors or bias could not be assessed.

The authors acknowledged potential for reporting bias arising from evidence based on case reports and the lack of long-term evidence about neonatal sequelae. Limitations in the reporting of review methods and limited data from case reports mean that the conclusions may not be reliable.

Implications of the review for practice and research
Practice: The authors stated that ECT should be strongly considered in pregnant women with severe symptoms of mental illness.

Research: The authors did not state any implications for research, although they noted the paucity of efficacy data.

Funding
Not stated.

Bibliographic details

PubMedID
19073751

DOI
10.1097/PSY.0b013e318190d7ca

Original Paper URL
http://www.psychosomaticmedicine.org/content/71/2/235.abstract

Indexing Status
Subject indexing assigned by NLM

MeSH
Abortion, Spontaneous /etiology; Adult; Anesthetics, General /adverse effects; Bradycardia /etiology; Cerebral Infarction /etiology; Depressive Disorder, Major /therapy; Electroconvulsive Therapy /adverse effects /utilization; Female; Fetal Death /etiology; Fetal Diseases /etiology; Gestational Age; Humans; Infant, Newborn; Obstetric Labor, Premature /etiology; Pregnancy; Pregnancy Complications /etiology /psychology /therapy; Pregnancy Outcome; Psychotic Disorders /therapy; Remission Induction; Retrospective Studies; Risk; Schizophrenia /therapy; Status Epilepticus /etiology /physiopathology

AccessionNumber
12009105549
Date bibliographic record published
30/09/2009

Date abstract record published
04/05/2011

Record Status
This is a critical abstract of a systematic review that meets the criteria for inclusion on DARE. Each critical abstract contains a brief summary of the review methods, results and conclusions followed by a detailed critical assessment on the reliability of the review and the conclusions drawn.