

DRUG INFORMATION

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SAFETY OF DISULFIRAM IN PREGNANCY

Question:

What is the safety of disulfiram in pregnancy?

Answer:

There is little data describing the safety of disulfiram in pregnancy^[1-4]. Thirteen pregnancies (14 fetuses) have been described who had in utero exposure to disulfiram^[1]. Of these, five pregnancies were electively terminated and autopsy on three fetuses failed to reveal evidence of congenital malformations. There were four 'normal' outcomes, one spontaneous abortion and four infants (including one set of twins) with congenital defects. These defects were described as club foot (n=2), multiple anomalies with VACTERYL syndrome (radial aplasia, vertebral fusion, tracheo-oesophageal fistula (n=1), phocomelia of lower extremities (n=1)^[1,2,5].

In a surveillance study of Michigan Medicaid recipients, 25 pregnancies had disulfiram exposure in the first-trimester of pregnancy. One major birth defect (cardiovascular) was observed (4.0%) which is similar to the frequency expected to occur in the general population^[1].

Reitnauer *et al.*,^[5] described female twins born to a woman who ingested disulfiram in the first-trimester of pregnancy. One of the twins had a shortened right forearm while the other had a cleft palate. Both infants were small for gestational age. Other drug exposure at the time of conception, or in the first-trimester included crack cocaine, ethanol, marijuana and cigarette smoking. The timing of exposure to disulfiram was consistent with the timing of foetal development of the upper limbs and palate^[5].

Helmbrecht and Hoskins^[6] described two women who inadvertently took disulfiram in the initial stages of pregnancy and delivered healthy babies. One woman took disulfiram for the first 6 weeks of pregnancy and delivered a healthy baby at 39 weeks gestation. The second woman took disulfiram in the first 10 weeks of pregnancy and her combined oral contraception for the first six weeks. She also abused alcohol, marijuana and cocaine, and smoked tobacco throughout pregnancy. A healthy baby was born at 41 weeks gestation. Both infants met early developmental milestones.

Conclusions:

There must be careful assessment of the risks and benefits prior to using any drug in pregnancy especially during the first trimester. In the case of disulfiram, there is extremely limited data describing its safety in pregnancy and this information may be confounded by exposure to other drug therapy (eg alcohol). This suggests that it would be preferable to avoid the use of disulfiram if at all possible. However, the risk of relapse of alcohol abuse must also feature in this assessment.

References:

1. Briggs GG *et al.* Drugs in pregnancy and lactation (5th ed), 1999
2. Drugdex, Micromedex database
3. Medline database 1966-2001
4. Embase database 1988-2001
5. Reitnauer PJ *et al.*, Teratology 1997; 56: 358-62.

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