

CASE REPORT

Risperidone in Pregnancy: A Case of Oligohydramnios

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Abstract

Randomized controlled trials in relation to psychopharmacological agents are not possible in pregnant women. There are only very few prospective studies and most information which is available is from retrospective studies, case series and case reports. Data of use of risperidone in pregnancy is sparse, case reports have suggested agenesis of corpus callosum; 9 live births with no malformation and 2 spontaneous abortions. Till now no study or case report has suggested association of oligohydramnios with risperidone (German J Psychiatry 2004; 7: 56-57).

Keywords: Risperidone, pregnancy, oligohydramnios

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Introduction

The safety of psychotropics has not been established in human pregnancy; therefore risks and benefits of their use have to be carefully considered (Cohen & Rosenbaum, 1998). A literature search revealed case reports, case series and reviews of use of clozapine and olanzapine in pregnancy (Waldman & Safferman, 1993; Ernst & Goldberg, 2002; Goldstein et al, 2000), but data of use of risperidone in pregnancy is sparse. Animal studies in rats has shown increased incidence of pup deaths and still birth with use of risperidone during pregnancy (Ernst & Goldberg, 2002). Rosengarten and Quartermain (2002) reported impaired learning and disrupted short term retention in adulthood (2 months) with use of risperidone in dam during pregnancy. In humans, case reports with use of risperidone in pregnancy suggested agenesis of corpus callosum (Physician's Desk Reference, 2001); 9 live births with no malformation and 2 spontaneous abortions (Levinson et al., 2003); no abnormality in two cases (Ratnayake & Libretto, 2002). To the best of our knowledge till now no study/case report have documented oligohy-

dramnios with use of risperidone in pregnancy. We present the following case as it highlights an interesting clinical situation associated with the use of risperidone in pregnancy in a patient of chronic schizophrenia and expand the data regarding the use of psychopharmacological agents in pregnancy.

Case History

N.G., 24 years old, belonging to a Hindu nuclear family of middle socioeconomic status from an urban background, presented with an acute onset, continuous gradually deteriorating illness of 3 years duration precipitated by failure in an examination; characterized by thought broadcast, visual hallucinations, delusion of reference, persecution and grandiosity, muttering to self, labile affect and disturbed biofunctions. She was started on tablet risperidone 4 mg per day 6-8 months after the onset of the illness, with which she showed improvement and got married about 18 months after the onset of the illness. The patient continued to be symptomatic for a year after marriage because of irregular drug

compliance, after which she conceived. Pregnancy was detected only after 8 weeks. Both the patient and her husband decided to continue the pregnancy even after being counseled about the risks. Because of increase in the symptoms, from the second trimester, the patient was continued on risperidone 4 mg per day with regular compliance. All the investigations i.e. VDRL, HIV, HBsAg were negative during the first trimester. Her blood group was "O +ve" and alpha fetoprotein levels done at 8 weeks was 5.1 ng/ml (normal <10ng/ml). She was started on vitamin (folic acid), calcium & iron supplements at 10th week of pregnancy. Ultrasound examination at 16th week showed no abnormality, but at 27th weeks showed mild reduction in amniotic fluid quantity. There was no evidence of premature rupture of membranes, intrauterine growth retardation, renal and urinary tract malformations in the fetus, any other drug use, maternal hypertension, and maternal diabetes. By the 39th week there was severe reduction in amniotic fluid, but there was no evidence of other causes which could contribute to oligohydramnios as described above in the negative findings. At the 39th week the patient was admitted for induction of labour. Within 2 days, the patient developed a poor biophysiological profile and had to undergo emergency caesarean section and gave birth to a female child weighing 3.2 kilograms. There was no evidence of congenital malformations at birth and Apgar score was 9 at both 1 and 5 minutes. Patient was advised not to breast-feed the baby. The baby is growing normally (currently 2 years of age).

Discussion

Oligohydramnios is a condition in which there is too little amniotic fluid around the fetus. Generally, it is caused by conditions that prevent or reduce amniotic fluid production. Factors that are associated with oligohydramnios include premature rupture of membranes, intrauterine growth retardation, post-term pregnancy, birth defects, especially kidney and urinary tract malformations, non-renal abnormalities like heart block, thyroid gland agenesis, cloacal dysgenesis, chronic abruptio, twin-to-twin transfusion syndrome, karyotype abnormalities like triploidy, turner syndrome, maternal hypertension, maternal diabetes, uteroplacental insufficiency and maternal use of prostaglandin synthase inhibitors or angiotensin-converting enzyme (ACE) inhibitors. A diagnosis of oligohydramnios is usually made using ultrasound, pockets of amniotic fluid can be measured and the total

amount estimated. Ultrasound can also show fetal growth, the structure of the kidneys and urinary tract, and detect urine in the fetal bladder. Doppler flow studies (a type of ultrasound used to measure blood flow) may be used to check the arteries of the kidneys (Arias, 2000; Peipert & Donnenfeld, 1991). It has been documented that oligohydramnios developing in the second trimester with normal alpha fetoprotein levels is associated with good prognosis (Peipert & Donnenfeld, 1991) as was seen in our case.

Our observation implies that risperidone should be used with caution and regular monitoring in pregnancy.

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