

SCIENTIFIC ABSTRACTS

Complications of Alcohol Use in Pregnancy

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Background: Alcohol is a potent teratogen and alcohol use in pregnancy and the periconception period can cause many complications in mother, fetus and neonate .

Discussion: Alcohol in the mother's blood passes through the placenta to the baby through the umbilical cord. Drinking alcohol during pregnancy can cause miscarriage, stillbirth, and a range of lifelong disorders. Alcohol-related birth defects (ARBDs) and alcohol-related neurodevelopmental disorder (ARND) in addition to fetal alcohol syndrome (FAS) are known as potential effects of alcohol use during pregnancy. Alcohol-related facial dysmorphism and growth deficiencies were increased in women with first trimester alcohol exposure and alcohol consumption in the second trimester affected birth weight and length and third trimester exposure affected length. Stillbirth and FAS are the most severe consequences of prenatal alcohol exposure. A diagnosis of FAS requires characteristic facial anomalies, growth retardation, and neurodevelopmental abnormalities. ARBD includes a confirmed history of maternal alcohol use plus one or more congenital defects, most often cardiac, renal, vision, hearing, or skeletal. Premature labor or preterm birth (small for gestational age neonates) is another complication of alcohol use in pregnancy. Excessive alcohol intake by mother can cause placental abruption which is dangerous for fetus and mother. Alcohol is one of the most frequent none genetic causes of mental retardation as well as leading cause of preventable birth defects.

Conclusion: Pregnant women and women planning to become pregnant should be advised to abstain from drinking alcohol.

Keywords: Alcohols; Fetal Alcohol Spectrum Disorders; Pregnancy

Antioxidant Effect of Ardeh and Honey Combination on Ethanol-induced Oxidative stress in Liver and Kidney of Rats

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Background: The pathogenesis of ethanol in the liver and kidney is associated with an increase in free radicals and oxidative stress that leads to structural and functional abnormalities in these vital organs.

Methods: Forty-eight male wistar rats were placed in eight groups and were treated as follows: control group (normal saline), group of ethanol (4 g/ kg), three doses of Ardeh and honey combination (1, 2 and 5 g/ kg body weight), and the three groups received three doses of Ardeh and honey combination with ethanol (the same three doses of combinations along with 4 g/ kg ethanol). All treatments were performed once daily for 60 consecutive days with method of stomach gavages. Serum, liver and kidney tissue samples were obtained in order to assess serum components, tissue antioxidant enzyme activities, and the level of thiobarbituric acid reactive substances (TBARS).

Results: Hepatic superoxide dismutase (SOD) and glutathione peroxidase (GPx) enzymes in the ethanol group significantly decreased compared with the control group, while the Ardeh and honey combination (5 g) could only significantly increased glutathione peroxidase activity. Renal GPx activity in ethanol consumption significantly increased compared to controls. GPx activity in Ardeh and honey combination and alcohol (5 g, 4 g) were significantly reduced compared to ethanol group. In the present study, the amount of TBARS which represents the rate of lipid peroxidation, in liver of ethanol group compared with the control group showed a significant increase (P<0.05).

Conclusion: Ardeh and honey combination as a pre-treatment, protect liver and kidney against oxidative damage induced by ethanol.

Keywords: Antioxidants; Ethanol; Kidney; Liver; Oxidative Stress