Alcohol levels in Chinese lactating mothers after consumption of alcoholic diet during postpartum "doing-the-month" ritual.

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Abstract

This study examined the effects of exposure to ethanol through cultural practices by lactating mothers. Specifically, the pharmacokinetics of alcohol in Chinese lactating mothers was investigated after they consumed chicken soup flavored with sesame oil and rice wine (CSSR), a typically prescribed diet during the postpartum "doing-the-month" period. Experimental findings were employed to estimate the potential ethanol dose to neonates and determine associated health risks. Twenty-three lactating mothers were examined. Informed consent was obtained from each subject. The target alcohol dosage was 0.3g/kg. Milk and blood samples were collected at fixed time intervals from each subject following exposure to CSSR, and alcohol levels were determined. Acute health risks to infants were estimated by comparing the potential infant dosage to an established criterion dose. Blood alcohol level peaked at 20min after exposure to CSSR and decreased almost linearly thereafter. Alcohol in milk reached a plateau roughly at 20–40min after exposure to CSSR and then decreased. Alcohol pharmacokinetics among subjects varied widely. The coefficients of variation in subject alcohol concentrations were 16.5–46.2% (mean, 30.0%) for blood and 32.8–57.6% (mean, 44.4%) for milk. Mean maximal alcohol concentration in blood (30.2±5.0mg/dl) was achieved at 23.5±7.6min and in milk (31.6±10.3mg/dl) at 31.7±12.7min. Potential infant doses were 3.0–58.8mg (mean, 13.4mg), and the predicted time required for milk alcohol level to return to zero level was 175min. The acute health risks for infants exposed to alcohol through their mothers' milk under the current exposure scenario are low (hazard index<0.2). Nursing infants at least 3h after ingesting a diet containing alcohol would further reduce potential health risks.