

D-Fenfluramine-Induced Prolactin Responses in Postwithdrawal Alcoholics and Controls

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Abstract:

Serum prolactin response to the serotonin agonist d-fenfluramine were measured in 19 DSM-111-R male alcoholics, 2.5 or more weeks postalcohol withdrawal. Prolactin responses were compared with nine healthy nonalcoholic male controls. After an overnight fast, each subject received 30 mg of d-fenfluramine orally, and serial samples of serum prolactin were taken over a 4-hr period. d-fenfluramine caused a significantly attenuated peak δ -prolactin response in the alcoholics relative to the controls ($p=0.05$). A repeated-measures ANOVA of δ -prolactin yielded a significant within-subjects effect of time ($p < 0.05$), a within-subjects effect of group that reached significance ($p=0.05$), and a nonsignificant group by time interaction. The δ -prolactin value at time points 60 and 240 min postadministration of the probe was significantly attenuated in the alcoholic group, with $p < 0.05$. There was also some evidence for a diminished serotonergic response in those alcoholics with a negative family history. The δ -prolactin response did not correlate with subjects' age, duration of alcohol use, duration of abstinence from alcohol, severity of alcohol dependence, or age of onset. Results imply a relative sub-sensitivity of the serotonin system in postwithdrawal alcoholics, and this may be primarily of the 5-HT₂ receptor.