Lack of Effect of Acute Alcohol Ingestion on Plasma Lipids, S. Booth, P. M. Clifton, and P. J. Nestel (CSIRO, Div. of Human Nutrition, P.O. Box 10041, Gouger St., Adelaide 5001, Australia)

Chronic ingestion of ethanol is associated with increases of triglycerides and high-density lipoprotein (HDL) cholesterol in plasma, in both normal and alcoholic subjects (1-4). Short-term ethanol ingestion (4-28 days) usually has a similar but transitory effect, although the response is quite dependent on the amount of ethanol, the baseline concentration of plasma triglyceride, the degree of obesity in the subjects, and the amount of fat eaten with the ethanol (5-10). Some studies (9, 10) have shown no effect of ethanol ingestion on plasma lipids in normolipidemic, nonobese subjects, although Taskinen and Nikkila (7) found that a single evening drink of 1.5 mg of ethanol per kilogram of body weight produced increased triglyceride concentrations 11 h later in 25% of normal subjects. Complete abstinence from ethanol is usually recommended in the 24 h immediately preceding blood sampling, but no data are available to support this unequivocally.

We conducted a controlled clinical trial in 31 men and four women of the effect of ingesting 20, 40, and 60 g of alcohol on the fasting concentrations of plasma lipids. All subjects were moderate drinkers; i.e., they consumed between three and 14 drinks per week. The alcohol was taken as a single dose of wine or beer with an evening meal containing 35 g of fat, 14 h before blood sampling. Three consecutive baseline samples were taken after 72 h of abstinence and a 14-h fast; the evening meal preceding the sampling also contained 35 g of fat. Each test dose was separated by two weeks and was preceded by a 72-h alcohol-free period. The volunteers consumed all three test doses in no specific order. The results were as follows:

<table>
<thead>
<tr>
<th>Cholesterol</th>
<th>Baseline</th>
<th>20</th>
<th>40</th>
<th>60</th>
</tr>
</thead>
<tbody>
<tr>
<td>Total</td>
<td>5.07 (1.07)</td>
<td>+0.03 (0.43)</td>
<td>-0.01 (0.35)</td>
<td>-0.01 (0.59)</td>
</tr>
<tr>
<td>HDL</td>
<td>1.20 (0.28)</td>
<td>+0.00 (0.16)</td>
<td>+0.01 (0.10)</td>
<td>+0.01 (0.16)</td>
</tr>
<tr>
<td>LDL</td>
<td>3.42 (0.99)</td>
<td>+0.01 (0.50)</td>
<td>+0.01 (0.34)</td>
<td>-0.03 (0.55)</td>
</tr>
<tr>
<td>Triglyceride</td>
<td>1.15 (0.54)</td>
<td>+0.06 (0.35)</td>
<td>-0.05 (0.28)</td>
<td>+0.06 (0.87)</td>
</tr>
</tbody>
</table>

As shown, acute ingestion of ethanol had no significant effect on fasting plasma triglyceride, HDL cholesterol, or low-density lipoprotein (LDL) cholesterol. The study had 80% power to demonstrate a 9.5% change in triglycerides and a 5% change in LDL and HDL cholesterol with a significance of P < 0.05. Hyperlipidemic subjects (plasma triglyceride >2 mmol/L or plasma cholesterol >5.2 mmol/L) did not show an enhanced response to ethanol. Only one subject showed a significant increase in plasma triglyceride, from 1.6 to 6.4 mmol/L, after 60 g of alcohol. Thus moderate ingestion of ethanol the evening before measurement of lipid concentrations does not invalidate the measurements obtained.

References


Technetium (99mTc) and gallium (67Ga) are radionuclides used commonly for diagnostic purposes. No data are available to indicate whether these radionuclides interfere with various RIAs. In the present study, we evaluated the effects of 99mTc and 67Ga on routine RIAs.

We determined concentrations of 99mTc or 67Ga in the circulation of two patients who received, respectively, 20 mCi of 99mTc methylene diphosphonate (99mTc MDP) for bone imaging and 5 mCi of 67Ga for abces evaluation. The radioactivity was calculated to be 0.304 mCi of 99mTc per liter of serum (0.67 × 10^6 dpm/mL) and 0.889 mCi of 67Ga per liter of serum (1.97 × 10^6 dpm/mL) for blood drawn 1 h after injection of the isotopes. The lower activity of 99mTc MDP is most likely related to urinary excretion of...