Endocrine Society Releases Guidelines on Diagnosis and Management of Hypertriglyceridemia

Guideline source: The Endocrine Society

Evidence rating system used? Yes

Literature search described? Yes

Guideline developed by participants without relevant financial ties to industry? No

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Available at: https://www.endocrine.org/~/media/endosociety/Files/Publications/Clinical%20Practice%20Guidelines/082312_Hypertriglyceridemia_FinalA.PDF

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A collection of Practice Guidelines published in *AFP* is available at http://www.aafp.org/afp/practguide.

Elevated triglyceride levels typically occur in persons with other metabolic abnormalities. Contributing factors include overweight and obesity, physical inactivity, excessive alcohol intake, metabolic syndrome, type 2 diabetes mellitus, and certain genetic disorders (e.g., familial hypertriglyceridemia, familial combined hyperlipidemia, familial dysbetalipoproteinemia). The Endocrine Society recently published evidence-based recommendations on the diagnosis and management of hypertriglyceridemia in adults.

Diagnosis

The diagnosis of hypertriglyceridemia should be based on fasting serum triglyceride levels. Cutoffs as defined by the Endocrine Society are 150 to 199 mg per dL (1.7 to 2.3 mmol per L) for mild hypertriglyceridemia; 200 to 999 mg per dL (2.3 to 11.3 mmol per L) for moderate; 1,000 to 1,999 mg per dL (11.3 to 22.6 mmol per L) for severe; and 2,000 mg per dL (22.6 mmol per L) or greater for very severe. Mild or moderate hypertriglyceridemia may be a risk factor for cardiovascular disease, whereas severe and very severe hypertriglyceridemia increase the risk of pancreatitis. Of note, the National Cholesterol Education Program, Adult Treatment Panel III (NCEP ATP III) uses the following cutoffs: 150 to 199 mg per dL for borderline-high triglycerides; 200 to 499 mg per dL (2.3 to 5.6 mmol per L) for high; and 500 mg per dL (5.7 mmol per L) or greater for very high. Similar to NCEP ATP III, the Endocrine Society recommends that physicians screen adults for elevated triglyceride levels as part of a lipid panel at least every five years.

Although persons with hypertriglyceridemia typically have smaller low- and high-density lipoprotein particles compared with persons who have normal triglyceride levels, lipoprotein particle size and density should not be routinely measured in these patients. Measurement of apolipoprotein B or lipoprotein A levels may be useful in suggesting cardiovascular risk in patients with normal low-density lipoprotein levels, but measurement of other apolipoprotein levels has little clinical value.

Primary and Secondary Causes

Patients with elevated fasting triglyceride levels should be evaluated for secondary causes of hyperlipidemia and treated accordingly. Secondary causes include excessive alcohol intake, untreated diabetes, endocrine conditions, renal or liver disease, pregnancy, autoimmune disorders, and use of certain medications (e.g., thiazides, beta blockers, estrogen, isotretinoin, corticosteroids, bile acid–binding resins, antiretroviral protease inhibitors, immunosuppressants, antipsychotics). It is unclear whether hypertriglyceridemia causes atherosclerosis; an elevated triglyceride level may, in some cases, be a marker for cardiovascular disease rather than a causal factor. However, because of the lack of clear data showing that reductions in triglyceride levels reduce the risk of cardiovascular disease, hypertriglyceridemia should be considered a marker for risk in some patients. Therefore, to assess genetic causes ▶

and cardiovascular risk, patients with primary hypertriglyceridemia should be evaluated for family history of dyslipidemia and cardiovascular disease. These patients also should be assessed for other cardiovascular risk factors, such as central obesity, hypertension, abnormal glucose metabolism, and liver dysfunction.

Management

Much of the increase in serum triglyceride levels that occurs in adults is caused by weight gain, lack of exercise, and a diet rich in simple carbohydrates. Initial treatment of patients with mild to moderate hypertriglyceridemia should include dietary counseling and weight loss in patients who are overweight or obese. For patients with severe to very severe hypertriglyceridemia, reduced intake of dietary fat and simple carbohydrates is recommended, in combination with drug treatment to reduce the risk of pancreatitis.

The treatment goal for patients with moderate hypertriglyceridemia is a non–high-density lipoprotein cholesterol level of 30 mg per dL (0.78 mmol per L) higher than the low-density lipoprotein goal, as recommended by the NCEP ATP III (http://www.nhlbi.nih.gov/guidelines/cholesterol/atp_iii.htm). Fibrates are the first-line treatment in patients with hypertriglyceridemia who are at risk of pancreatitis. Fibrates, niacin, and n-3 fatty acids, alone or in combination, should be considered in patients with moderate to severe hypertriglyceridemia. Statins have a modest triglyceride-lowering effect (typically 10% to 15%) and may be useful to modify cardiovascular risk in patients with moderately elevated triglyceride levels. However, they should not be used alone in patients with severe or very severe hypertriglyceridemia.

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Answers to This Issue's CME Quiz

Q1. B
Q2. B
Q3. B
Q4. A, B, D
Q5. A
Q6. A
Q7. A, B, C, D