MCQ1: What is the first-line agent for the long-term management of patients with severe to very severe hypertriglyceridemia?

Answer: Insulin. Triglyceride levels >1,000 mg/dL are associated with a marked increase in the risk of pancreatitis. Diagnosis in the acute setting requires a high degree of suspicion. A lipemic blood sample can often be the first sign of hypertriglyceridemia in a patient presenting to the emergency department with severe epigastric pain. Early intervention with plasmapheresis and or IV insulin reduces the risk of further complications.

For non-emergent treatment, fibrates are the mainstay of therapy for reduction of triglycerides in patients at risk for triglyceride-induced pancreatitis, reducing plasma triglyceride levels by up to 50% and raising the high-density lipoprotein (HDL) cholesterol by 20%.[1] Fibrates modulate peroxisome proliferator activated receptors-α (PPAR-α) in the liver, resulting in decreased hepatic secretion of VLDL and increased lipolysis of the plasma triglycerides. To a lesser extent, fibrates decrease amounts of circulating LDL particles and increase HDL levels.[2]

In contrast, doses of 500-2000 mg of niacin per day only lowers triglyceride levels by 10–30%, increases HDL cholesterol by 10–40%, and lowers LDL cholesterol by 5–20%. Niacin can be combined with fibrates for additional triglyceride lowering effect, but is not recommended as a first line agent. Statins also have a modest triglyceride-lowering effect; however, statin monotherapy is not recommended as the first line therapy for severe hypertriglyceridemia. Statins typically lower plasma triglycerides by about 10–15%, with high doses lowering plasma triglyceride levels by 25–30%. There is no recommendation for insulin therapy as a long-term treatment of hypertriglyceridemia.

MCQ2: What ophthalmological physical exam finding is associated with this condition?

Answer: Lipemia retinalis. Lipemia retinalis refers to a whitish discoloration of the vessels on fundoscopic exam and is thought to be directly correlated with serum triglyceride levels. Over time, the condition can lead to worsening of visual acuity. Lipemia retinalis is reversible with normalization of serum lipid levels.[3]

Xanthomas are brown-yellow papules caused by lipid deposition and associated inflammation on the surface of the skin. They often occur in the periorbital region, but not in the eye itself. Scleral icterus refers to yellowing of the sclera due to hyperbilirubinemia associated with liver dysfunction or hemolysis. Muddy brown sclera is a muddy-brown discoloration that constitutes a normal variant of scleral coloration. It is commonly seen among older African Americans.

References

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