

Vascular Risk Reduction in Adult DM Type II patients: Addition of a Fibrate to a Statin

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Abstract

Diabetes mellitus is associated with a high risk of vascular complications and potential death related to these complications. Reducing the risk for vascular disease is a major focus in diabetes treatment. A case presentation of a 65-year-old female with uncontrolled type II diabetes mellitus on a statin as a single lipid lowering agent is discussed below. A literature synthesis was done to ascertain if the addition of a fibrate is helpful in lowering vascular risk in those with type II diabetes mellitus. The literature reviewed concludes that vascular risk may be reduced in some patients with type II diabetes using combination fibrate and statin therapy, and its use may be beneficial in particular subsets of patients.

Background

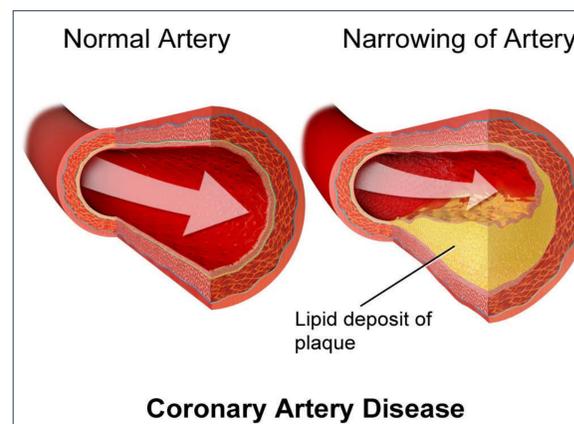
- Adult patients with diabetes have an increased risk for vascular events, including myocardial infarction and stroke
- Specific risk factors that increase ones risk include hypertriglyceridemia, suboptimal HDL-C, and increased LDL-C
- Guidelines currently recommend the use of a statin medication to lower LDL-C in these patients
- Fibrates are a type of lipid lowering medication that can significantly reduce triglyceride levels, but have not been recommended to use in conjunction with a statin related to possible adverse side effects including renal adverse effects, rhabdomyolysis, and liver toxicities

Case Report

- 66 year-old obese male with uncontrolled type II diabetes mellitus
Hgb A1c: 9.5mg/dL
- Triglyceride levels elevated at 167mg/dl with normalization of LDL-C and slightly decreased HDL-C
- Vital signs within normal limits
- Current medications:
Glipizide 10mg daily
Lisinopril 10mg daily
Toprol XL 50mg daily
Janumet 1000mg twice daily
Aspirin 81mg daily
- Recommendations:
Discontinue glyburide
Start Lantus 10units nightly
Check blood sugars three times daily
Follow up in two weeks
Diabetes resource center referral placed

Literature Review

- Triglycerides were reduced with the addition of a fibrate to a statin by greater than 30%
- HDL-C levels were increased with the addition of a fibrate to a statin by approximately 9%
- Adverse events were similar in those with statin monotherapy and those using fenofibrate or bezafibrate in addition to a statin medication
- The release of interleukin-2, interferon 4, and tumor necrosis alpha that are found with inflammation were reduced in a study with the combination of a fibrate to a statin versus statin use alone
- Major cardiovascular events and mortality were decreased in adults with type II diabetes and acute coronary syndrome with the addition of a fibrate to a statin in a study including greater than 3,000 patients
- Measurements of carotid artery thickening were decreased in patients with coronary artery disease and diabetes who were greater than age 60 with triglyceride levels greater than 170mg/dL with the addition of a fibrate to a statin



Conclusion

- Fenofibrate or bezafibrate can be used safely in adult patients with type II diabetes mellitus, in combination with a statin medication for lipid control
- Vascular risk can be reduced through the reduction of triglycerides and increase in HDL-C in adults with type II diabetes with the addition of fenofibrate to a statin
- Additional long-term studies are recommended to ascertain the most beneficial fibrate and dosing to be used in combination with a statin to reduce vascular risk in adults with type II diabetes mellitus

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