

PROJECT FACT SHEET

Improving Cardiac Outcomes for People with Diabetes

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Heart attacks and other heart conditions are related to the narrowing of coronary arteries. In recent years, percutaneous coronary interventions (PCIs) designed to treat this narrowing have advanced. These interventions include the use of stents that release medication and prevent clogging of the arteries.

However, the effectiveness of PCIs is limited for people with diabetes, whose arteries are more likely to narrow around the stent making repeat coronary episodes and additional procedures more likely. Lawrence Title looked at a new method for protecting diabetics who have had PCIs in a recent study funded by the Nova Scotia Health Research Foundation.

Physicians commonly use drugs called thiazolidinediones to treat diabetics with heart conditions. These drugs lower blood sugar by making cells more sensitive to insulin and protect diabetics from heart conditions by increasing HDL or “good” cholesterol. Dr. Title tested the potential of using the drug pioglitazone to control blood sugar and reduce the amount of post-procedural arterial narrowing.

Working with investigators in Quebec and Ontario, Dr. Title randomly assigned 50 type 2 diabetic patients who had undergone a PCI to one of two groups. The target blood sugar level for the first group was less than six per cent (the intensive glysemic control group), and for the second group, less than seven per cent (the conservative glycemc control group). An intravascular ultrasound was performed immediately after patients had a PCI and after six months of medication to determine the effect of this therapy on plaque build-up within and around the patient’s stent.

“We found the intensive glycemc control group had no favourable effects on preventing plaque build-up within or near the stent,” says Dr. Title.

“The clinical outcomes were similar in the two groups after six months with no significant improvement in the rate of restenosis or the need for repeat procedures,” he adds.

- 30 -

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