



North Shore Eye Centre

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ADVANCE Study: Blood Pressure lowering and Glucose Control in Type 2 Diabetes

Background Information

Diabetes and high blood pressure are significantly associated with the risk of vascular complications such as blockages in the major arteries of the heart and brain, and also in smaller arteries in the kidney and eye. These complications can lead to heart disease, stroke, kidney disease, blindness and death. Although patients with diabetes have an increased risk of developing vascular diseases, this risk can be reduced with glucose control as well as by lowering the blood pressure in diabetics, in the presence or absence of hypertension.

The ADVANCE Study

A collaborative group including Dr Michael Branley have been involved in the ADVANCE study, which is an international trial on the management of patients with diabetes. The study investigates the benefits of lowering blood pressure and the role of glucose control in patients with type 2 diabetes mellitus.

In this study, a range of participants with type 2 diabetes receive a fixed combination of 2 antihypertensive agents, perindopril and indapamide, in combination with a modified-release glucose lowering treatment. This treatment regimen is regardless of whether the patients are hypertensive or not, and regardless of the use of other antihypertensive or additional medications.

The results indicate that the reduction in blood pressure is significantly associated with reduction in vascular complications. According to the findings, the risk of major vascular complications is significantly reduced by 9%.

The ADVANCE study therefore demonstrates that lowering blood pressure (with perindopril and indapamide) and lowering glucose levels below the recommended standards is important in reducing the risk of significant vascular complications including stroke, heart attack, kidney failure and blindness as well as reducing mortality in type 2 diabetic patients, regardless of the blood pressure at baseline.