

The ADA recommends performing a lipid profile after diagnosis of diabetes in children over age 2 years, and when glucose control has been established. If values are considered low risk and there is no family history, assessments should be repeated every 5 years.

“The primary goals of lipid screening in children and adolescents are to identify abnormalities, intervene and diminish CV risk,” explained Kenneth Jones, MD, University of California, San Diego. “Diabetes and dyslipidemia contribute to the acceleration of atherosclerosis and increase CV risk, and this process begins in childhood.”

Many young individuals with obesity and T2 diabetes have the dyslipidemia of insulin resistance, with its attendant risks. The treatment of familial hypercholesterolemia (FHC) with statins is safe and efficient and improves signs of vascular injury (*Lancet* 2004), according to Dr. Jones.

“There is a pressing need to identify lipid abnormalities in young people and study the safety and benefits of intervention,” he concluded.

Microalbuminuria

Risk factors for microalbuminuria (MA) are early onset of diabetes, long duration of diabetes, poor glycemic control, family history of nephropathy, smoking, autonomic neuropathy or retinopathy, poor diet, lack of exercise and hyperlipidemia. A rise in BP (hypertension) does not precede MA.

“Those who develop T1D before puberty appear to be in a latent period followed by more rapid development of MA with pubertal onset,” explained Denis Daneman, MD, Hospital for Sick Children, Toronto, Canada.

According to Dr. Daneman, extrapolations from adult and adolescent studies may be misleading, which indicate that studies of natural history of diabetes-related complications starting in pre-pubescent children are warranted.

These four complications can all affect the outcome of diabetes treatment and care, and should be screened in pediatric diabetes patients, according to guidelines developed by ADA and other organizations, in order to avoid further complications.

Clinical Inertia Leads to Inadequate Treatment of Hypertension and Hyperglycemia

Four independent studies have shown that doctors are failing to intensify therapy in people with type 2 diabetes and high blood glucose levels or high blood pressure. Physicians do not appear to be aware of the American Diabetes Association guidelines or choose not to follow them because, in the populations we studied, the antihypertensive regimen was intensified in only 26 percent of visits in which the individuals had elevated blood pressure,” said Alexander Turchin, MD, MS, Brigham and Women’s Hospital and Harvard Medical School, Boston, MA.

Other studies identified failure to intensify treatment to maintain blood glucose levels at the recommended A1C goal of less than 7%, and delay in therapy intensification for those on oral anti-diabetic drugs on average until A1C was 8.5%.

Brigham & Women's Hospital study

The Brigham and Women's Hospital study reviewed outpatient records of 1,244 hypertensive patients with type 2 diabetes and analyzed blood pressure data and evidence of antihypertensive therapy intensification. The study found that regimens were intensified at only 26% of visits where elevated blood pressure was documented. For every 10 mm of mercury of systolic pressure the probability of intensification of the antihypertensive regimen increased 40%; for every 10 mm of mercury of diastolic pressure, the probability increased 20%.

The study also found that the younger the physician, the greater the probability that blood pressure medications would be intensified. Younger physicians, having just completed a residency, may be more aware of current ADA guidelines.

The Johns Hopkins study

Shari Bolen, MD, The Johns Hopkins University of Medicine, Baltimore, MD, stated that a Johns Hopkins study identified 1,374 type 2 diabetic patient visits with sub-optimally controlled blood pressure. Physicians intensified antihypertensive treatment in only 12% of visits. Physicians were twice as likely to intensify if the visit was routine, rather than urgent. Intensification was almost twice as likely if the person was seen by his/her regular doctor instead of a covering provider.

"Several factors were associated with a 40 to 50% lesser likelihood of intensification, including a higher glucose level or a history of coronary heart disease, suggesting in both instances that the physician focused on other clinical concerns to the detriment of attention to the hypertension problem," said Dr. Bolen.

Oral Anti-Diabetic Agents

Novartis Pharmaceutical Corporation studied the prescribing pattern of oral anti-diabetic drugs using a retrospective analysis of the pharmacy and lab claims of a commercial PPO model of a national managed care organization. The study identified 9,416 type 2 diabetics who had received a first prescription of metformin, a sulfonylurea or a thiazolidinedione. The study only looked at claims, not physician notes.

The average time to therapy intensification, when another medication was added, was 240 days. By that time, according to Craig A. Plauschinat, PharmD, MPH, Outcomes Research Manager at Novartis, the average A1C was 8.5%, but 67% of these individuals had A1C levels near 10%

"Disturbingly, 50% of those who were intensified did not have an A1C in their charts prior to the addition of a second drug," stated Dr. Plauschinat. "It is unknown how the physician made the decision to add a second drug in the absence of A1C testing, although it is possible the decision was based on a finger stick glucose test in the office or patient reports of home blood glucose testing." Clinical inertia may be an important barrier to effective diabetes treatment. The identification of factors contributing to clinical inertia will allow physicians and the ADA to design interventions aimed at increasing treatment intensity and improving outcomes, according to Dr. Turchin.