

Best of the ADA Scientific Sessions 2006

*Highlights from the American Diabetes Association Scientific Sessions
June 9-13, 2006, Washington, DC*

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In June, physicians gathered in Washington, DC for the American Diabetes Association Scientific Sessions. A main research finding was that many diabetic patients are not receiving optimal glycemic or antihypertensive therapy. Here are some new data on this important topic.

Failure of Insulin Monotherapy

Among diabetic patients on insulin monotherapy, up to three quarters have inadequate glycemic control ($A1c > 7.0\%$). Data from a population-based study were presented by Stephen Gough, MD, of the University of Birmingham in the United Kingdom.¹

The data were gathered from 6 million patient records in Germany and 3.6 million patient records in the United Kingdom. Most of the

records were from primary care practices.

Despite insulin use, many diabetic patients remained above recommended glycemic targets; about one third (32.3%) had $A1c \geq 9.0\%$ and almost one fifth (18.2%) had $A1c \geq 10.0\%$. For 3658 patients with type 2 diabetes, the overall mean A1c was 8.42% and the overall media A1c was 8.10%. The proportions of patients with poorly controlled A1c values were similar in both countries. In Germany, 30.1% had an $A1c \geq 9.0\%$ and 18.6% had an $A1c \geq 10.0\%$. In the United Kingdom, 34.0% had an $A1c \geq 9.0\%$ and 17.9% had an $A1c \geq 10.0\%$.

The authors noted that individual patients may not achieve optimal insulin therapy due to factors such as inadequate titration, physician and

patient reluctance to insulin, and lack of familiarity with the advantages of new analog insulins. They suggest that overcoming these obstacles is essential to close the gap between recommended glycemic targets and control in the clinical setting.

A1c Values in Insulin-Treated and Insulin-Naïve Patients

Data derived from a large sample of clinical trials of patients with type 2 diabetes show that recommended glycemic targets are often exceeded by a clinically significant margin. Alberto de Leiva, MD, of the Hospital de la Santa Creu i Sant Pau in Barcelona, Spain, and his colleagues examined 93 trials involving 15,833 people with type 2 diabetes.² The authors excluded studies that limited enrollment to

patients with $A1c \geq 8.5\%$ or that identified $A1c$ values after a washout period between oral antidiabetic therapy and the start of insulin therapy, in order to avoid artificial inflation of the mean $A1c$ value at trial entry. The authors calculated the overall $A1c$ value by weighting the mean $A1c$ from each trial by the number of patients enrolled.

The baseline weighted mean $A1c$ at baseline was 9.07% for the 7684 insulin-naïve patients and 8.51% for the 8,149 insulin-treated patients. The authors were surprised that the weighted mean $A1c$ for patients taking insulin was only about 0.5% better than for patients who were not taking insulin. They suggest that titration of insulin was insufficient or that adherence to prescribed therapy was poor.

Treatment of Hypertension in Diabetic Patients

Most diabetic patients with hypertension are not receiving adequate hypertensive therapy from their primary care physicians. A new study

examined clinical inertia, which was defined as “lack of appropriate action in response to an abnormal finding.” Alexander Turchin, MD, MS, of Brigham and Women’s Hospital in Boston presented the findings.³

Data were gathered from 172,357 notes from 582 primary care physicians regarding 12,806 patients with documented diagnosis of diabetes. Most of the patients were hypertensive. The mean systolic blood pressure was 131 mm Hg, and the mean diastolic blood pressure was 75 mm Hg. Systolic blood pressure was > 129 mm Hg in 55.2% and > 139 mm Hg in 31.5%. Diastolic blood pressure was > 84 mm Hg in 16.5% and > 89 mm Hg in 11.1%. Researchers identified instances of prescription intensification, which was defined as any increase in the dose of an existing anti-hypertensive medication or initiation of a new anti-hypertensive medication.

In patients with documented elevated blood pressure, anti-hypertensive prescription intensification was documented in 21.4% of

notes. In 57.9% of the notes that documented high blood pressure levels that were greater than goal levels for diabetics, systolic blood pressure was > 129 mm Hg or diastolic blood pressure was > 84 mm Hg.

Researchers found that prescription intensification was increased among male patients, older patients, and patients who were members of an ethnic minority. Younger doctors and residents were more likely to intensify hypertensive therapy than were older doctors.

As a cardiovascular disease, it is imperative that cardiologists take a “wholistic” and aggressive approach to the treatment of diabetes, including aspects such as dyslipidemia, hypertension, hyperglycemia, and obesity, in the hope of reducing the associated cardiac and vascular risk (Table 1). ■
[Norman E. Lepor, MD, FACC, FAHA]

References

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Table 1
Addressing Multiple Risk Factors in Diabetic Patients

Risk Factor	Target	Recommendation
A1c	< 7%	Reduce to < 6% if possible to do so without inducing hypoglycemia
Blood pressure (mm Hg)	< 130 systolic < 80 diastolic	Use an ACE inhibitor or an ARB as part of a regimen to lower blood pressure
Lipids		
LDL-C	< 100 (< 70 is optional)	Use a statin for patients with a CV history or age > 40 years (regardless of baseline LDL-C) to lower LDL-C by 30% to 40%
HDL-C	> 40 in men, > 50 in women	
TG	< 150	
<ul style="list-style-type: none">• Use aspirin in patients > 40 years or with other risk factors, or who have a history of cardiovascular disease• Use an ACE inhibitor in patients > 44 years with another cardiovascular risk factor		

ACE, angiotensin-converting enzyme; ARB, angiotensin receptor blocker; LDL-C, low-density lipoprotein cholesterol; CV, cardiovascular; HDL-C, high-density lipoprotein cholesterol; TG, triglycerides.

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Main Points

- Among diabetic patients on insulin monotherapy, up to three quarters might have inadequate glycemic control.
- The weighted mean A1c for patients taking insulin was only about 0.5% better than for patients who were not taking insulin.
- When diabetic patients with persisting hypertension presented to primary care clinicians, anti-hypertensive therapy was intensified only 21.4% of the time.
- Prescription intensification was increased among male patients, older patients, and patients who were members of an ethnic minority.