OBSERVATIONS

Diabetes and Driving

The recent article "Diabetes and Driving" (1) was the most comprehensive review of this subject that I have encountered. It concluded with the recommendation that further studies be performed to identify high-risk groups of diabetic subjects and that interventions take place for reducing the risk of motor vehicle accidents.

Although beyond the scope of the cited review, there is certainly one benign intervention that is appropriate even before new evidence appears: check blood glucose before driving and hourly thereafter while driving. A corollary to this intervention would be to correct blood glucose to a target value with calibrated glucose tablets or liquid glucose whenever it is below target. This should at least apply to patients using insulin, incretin mimetics, and sulfonylureas or similar medications that stimulate endogenous insulin production. Typically, 1 g glucose will raise blood glucose by ~5 mg/dl for a diabetic patient weighing ~70 kg (2).

The above instructions should be immediately, albeit belatedly, incorporated into the American Diabetes Association guidelines for blood glucose self-monitoring.

I have given these instructions to diabetic patients since the advent of blood glucose self-monitoring in 1969 and cannot understand why this protocol is still not universal. While we await further evidence, lives continue to be lost due to circumstances involving diabetic drivers.

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DOI: 10.2337/dc06-1779

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Type III Allergy to Insulin Detemir

Response to Darmon et al.

In their letter to the editor, Damon et al. (1) presented their observation of a local allergic reaction to insulin detemir. According to the patient's clinical appearance, they classified it as a type III allergy. Another case of a severe injection site reaction to insulin detemir was recently reported by Blumer (2). The described reactions to insulin injection are characteristically similar to a case of type III allergy we managed in our outpatient department in July 2004. We decided to start with insulin detemir to improve glycemic control in the 56-year-old female patient with type 1 diabetes. Diabetes was known for 40 years, and the last 2 years she was treated with intermediate-acting NPH insulin (Insulatard Human; Novo Nordisk) twice daily in combination with insulin aspart (NovoRapid; Novo Nordisk) before each meal. For a short period, the patient received insulin glargine (Lantus; Sanofi-Aventis) in place of NPH insulin. Neither under this therapy nor any other former medication did the patient describe an allergic reaction. Starting with the first injection of detemir, the patient developed local alterations quite similar to that which Darmon et al. reported. We also observed the development of dense, nonerythematous, and painful nodules with a diameter of 0.5 cm that occurred 4–6 h after insulin injection. These reactions persisted on average for 4–5 days and disappeared without intervention. The close temporal and local connection with injection of insulin detemir emphasizes its causal role in this case of allergy. Dermatological testing confirmed the type III reaction, while there was no indication of a type IV allergy. In conclusion, allergy to insulin detemir is rare and previously unreported in the literature, but the observation by Darmon et al. seems to be not the only one.

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DOI: 10.2337/dc06-1761

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Multifactorial Interventions Before Laser Photocoagulation Improve Outcome of Diabetic Macular Edema

Diabetic macular edema is often associated with multiple comorbid systemic conditions (1). In a pilot study (2), multifactorial interventions in clinically significant macular edema (CSME) led to a decrease in retinal thickness. However, the effect of these interventions, before laser photocoagulation, on the outcome of diabetic macular edema has not been studied.

In a prospective study, 125 patients (180 eyes; 72 men and 53 women; median age 55 years [range 38–72]) completed a minimum follow-up of 1 year (median 1.8 years [range 1.0–2.7]). All underwent multifactorial interventions, including initiation of insulin therapy ($n = 47$), newer oral hypoglycemic agents ($n = 70$), angiotensin receptor blockers ($n = 59$), ACE inhibitors ($n = 100$), lipid-lowering drugs ($n = 107$), iron supplements ($n = 22$), and antihypertensive agents ($n = 100$), in an attempt to optimize control. Patients were encouraged to meet the targets and maintain them throughout (3). Focal laser photocoagulation was done after 4–6 weeks of initiating control.

Final visual outcomes were compared in the "complete control" (all target values achieved) and the "partial control" (target values not achieved for one or more factors) groups. At baseline, demographic and lipid profiles of two groups were comparable, whereas blood pressure, HbA_{1c}, hemoglobin, and proteinuria