Pharmaceutical Economics & Health Policy

Editorial Comment

In the US Diabetes Control and Complications Trial (DCCT), patients with insulin-dependent diabetes mellitus (IDDM) were randomized and received either an intensive or conventional treatment regimen.[1] Evidence stemming from the DCCT suggests that, among patients meeting DCCT eligibility criteria, the adoption of an intensified regimen will result in an increase of 920,000 years of sight, 691,000 years free from end-stage renal disease, 678,000 years free from lower extremity amputation, and 611,000 years of life at an additional expense of $4 billion over the life-course of the population.[1] The estimated incremental cost per life-year gained is valued at $28,661.00. It has been concluded that over a lifetime, DCCT-defined intensive intervention reduces complications, improves quality of life, and can be expected to increase the length of life. From a health care system perspective, intensified intervention is considered well within a cost-effective domain. However, recent findings indicate a total of 65% (61.2 per 100 patient-years) of patients assigned to the intensive regimen experienced at least one episode of severe hypoglycemia relative to 35% (18.7 per 100 patient-years) of patients assigned to a conventional regimen.[2] Moreover, findings stemming from practice-based evaluations suggest an intensified regimen will improve glycemic control only if self-monitoring and medical surveillance are also intensified.[3]

In their commentary (p. 540) Campbell and Campbell argue persuasively for the individualization of the treatment regimen for patients with either IDDM or non–insulin-dependent diabetes mellitus (NIDDM) so as to minimize adverse events and maximize the probability of achieving desired end points. As noted by the authors, the challenge now is to develop synergy between recent pharmacotherapeutic advances in the treatment of IDDM and NIDDM and intensive and longitudinal patient education.[4,5]

Until recently, onychomycosis, particularly when it affected several nails, or involved a large nail plate area, was often regarded as untreatable.[6] Newer pharmacotherapeutic options penetrate the nail matrix within days of initiating a regimen and require a shorter course of treatment.[7] Einarson (p. 559) presents a novel methodology to summarize success rates across clinical trials, and thereby assign greater confidence to pharmacoeconomic assessments. This technique is illustrated by an examination of antifungal lacquers for the treatment of onychomycosis.

The role of cardiac sympathetic nerves in the regulation of coronary blood flow remains controversial.[8,9] Holmberg and colleagues (p. 570) examine the financial outcomes stemming from the use of either adenosine or dipyridamole in positron emission tomography (PET) among patients with coronary artery disease. Results indicate dipyridamole is more expensive to employ in PET ($928.00 per patient) relative to adenosine ($627.00 per patient).

3-Hydroxy-3-methylglutaryl coenzyme A (HMG-CoA) reductase is the key enzyme of cholesterol synthesis. HMG-CoA reductase inhibitors are potent reversible inhibitors of this enzyme, and function by competing for the substrate HMG-CoA.[10] Depending on the

dosage prescribed, these agents have been shown to reduce plasma cholesterol levels by more than 40%.[11] Spearman and associates (p. 582) document financial outlays (direct and indirect) and the effectiveness for the HMG-CoA reductase inhibitors in a randomized prospective assessment. From a managed-care perspective the authors present cost-effectiveness ratios and formulary guidelines.

I trust the readership will find these articles to be of interest and value.

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