EDITORIAL

Management of Cushing's disease in the US

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"You don't need a weatherman to know which way the wind blows"

— Bob Dylan, "Subterranean Homesick Blues," 1965

The review by Wilson et al.⁸ serves as an update to a prior report by Patil et al. that highlighted the incidence and several demographic factors that predicted national outcomes following transsphenoidal surgery (TSS) for Cushing's disease (CD) in patients identified in the Nationwide Inpatient Sample (NIS) between 1993 and 2002.⁵ Due to shifting demographic factors and ongoing innovations in health care, the authors sought to analyze more recent data and provide an accurate assessment of factors affecting outcomes in patients with CD who undergo TSS.

The primary goal was to assess socioeconomic, demographic, and hospital factors associated with surgical outcomes. Outcomes of interest were endocrine and non-endocrine complications, death, and nonroutine discharge.

From 2002 to 2010, there were 5579 transsphenoidal procedures (54 biopsies, 4254 partial resections, and 1271 total resections) for 5527 patients with CD who were identified in the NIS database. The overall mortality rate following TSS for CD was 0.45%. The incidence of non-endocrine complications was 11%, and the incidence of endocrine complications was 22%. Despite a general trend toward improvement in outcomes, only 0.9% of patients with Medicaid and 2.68% of those with Medicare received surgery compared to 9.7% of patients with private insurance.

This review provides an update of demographic factors that may affect outcomes of TSS for CD. It is the authors' hope that "Identification and targeting of such barriers to quality health care in patients with CD may help optimize patient outcomes on a national level and present an opportunity to improve access for high-risk patient groups to specialty centers of excellence."

Although it is important to continue to examine patient-specific demographics that affect outcomes in TSS

for CD, unfortunately the majority of these are nonmodifiable factors. It appears that a number of potentially modifiable hospital-specific factors need be further examined and taken into account in the treatment of these patients. The question that arises is how we define and increase access to "centers of excellence" and, perhaps, here is where we trust Mr. Dylan. In this study the authors examined a number of hospital-specific factors such as total number of beds, geographic region, hospital teaching status, and volume of TSS by institution. It is our opinion that the latter is crucial.

The concept that surgeon experience and hospital volume are critical to outcomes was first reported by Cushing and has been validated by a number of others, including one cited by the authors of this paper.^{1,3} In the review by Barker et al.,¹ TSS outcomes were reported via analysis of the NIS and showed significant differences of a positive nature in patient outcome variables where surgery was performed in higher-volume centers and by more experienced surgeons. With regard to rates of mortality, the group reported in-hospital rates of 0.4% at the highest-volume centers compared to 0.9% at the lowest-volume hospitals. High-volume centers also reported lower rates of postoperative complications, shorter length of stay, and an increased likelihood of discharge to home as opposed to a rehabilitation or long-term care center.¹ These findings are in line with those reported in a number of similar reviews.^{2-7,9} Although this study failed to show a statistically significant difference, it undoubtedly remains an important factor that must be taken into account and further examined.

In an era in which the concept of value has begun to drive patient care, studies such as this, which highlight ways to improve access and help to shed light on how to achieve excellence, are of paramount importance. If we were patients, we would want the focus on the value equation to be squarely on the numerator; that is, outcomes. We

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DISCLOSURE Dr. Selman owns stock in Surgical Theater and Osteoplastics II.

found it reassuring that the authors report a general trend toward improved outcomes of TSS, a promising sign that the wind is blowing in the right direction.

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