Disparities in care

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In this issue of the Journal of Neurosurgery, Jahangiri and colleagues12 retrospectively review 75 of their patients with nonfunctioning pituitary adenomas (NFAs) to identify reasons for delayed diagnosis after the onset of visual symptoms. This is an important study because visual symptoms are the most common presenting complaint for NFAs6,19 and because in this report and other studies an increase in the duration of symptoms has predicted a decreased likelihood of vision returning to the preoperative baseline.7 In fact, in this study, patients whose vision did return to their postoperative baseline had a median duration of symptoms of less than 3.5 months, while those who did not return to baseline had a median duration of symptoms of longer than 12 months. Most intriguing about their findings, however, was that the lag in the time between the onset of symptoms and the diagnosis was greatest in nonwhite patients older than 60 years of age.

Differences in diagnosis rate and treatment application based on age, sex, geographical location, and race have now been well documented.14 Evidence for these disparities exist in data derived from hospitals,4,9,17 nursing homes,13,18 and physician’s offices.23 It has also become clear that most disparities exist with regard to access to innovative, highly technical, or costly care.16,21 While many diseases have clear racial predilections, differences in outcome remain when we control for pathophysiology, expressed preferences, and appropriateness of care. In addition, distrust of medical professionals is more prevalent among minorities who have experienced discrimination in the past. Discrimination may not be overt but frequently consists of making assumptions about a person, such as their financial status, or failing to stay abreast of factors that affect physiological responses to various therapeutic efforts. The resultant disparities are unintended, but nevertheless quite real.

As pointed out in this article by Jahangiri et al.,12 differences in outcome are most often related to differences in treatment application. For example, it has been demonstrated that African-American women are more likely than Caucasian women to terminate their chemotherapy prematurely41 and are less likely to receive radiation therapy after lumpecomy for breast cancer, which is currently the standard of care.8 Similarly, a lower rate of surgical treatment largely explains the lower survival rate among African-American patients with early stage non–small cell lung cancer.1 This suggests that differences in cancer biology may not be the major factor in discrepancies in treatment outcomes.3

There are, however, some examples where bona fide differences in outcome exist despite apparently equivalent therapy. For example, African-American and Native American patients with neuroblastoma often have a higher risk disease that may be more resistant to chemotherapy.10 In addition, there is evidence that racial differences in pharmacogenetics can lead to different risk and benefit profiles between participants of different races in early phase clinical trials suggesting that these differences may need to be accounted for earlier in our clinical experimentation and that enrollment in clinical trials should be racially diverse to enhance the detection of these phenomenon as well as enhancing the study’s generalizability.15

Race is only a crude surrogate for a variety of other factors, however, that may impact the risk or the benefit that a given patient receives from given therapy. Although race does not equal genotype, patients with shared genetic and cultural heritage do have related genotypes and phenotypes. Thus, work to establish important genetic polymorphisms within the background of social environmental and epidemiological differences should significantly enhance our understanding and ability to reverse some of these important racial disparities.

The US Department of Health and Human Services has recently released a report20 that officially acknowledges the health care disparities that have existed in the US for decades and appropriately outlines the actions mandated by the government to reduce and eliminate these disparities. Although neurosurgeons are not frequently
the ones who would see a patient during initial symptoms of visual disturbance, the article by Jahangiri et al. is important in our field precisely because it will hopefully raise the awareness of the neurosurgical community to potential differences in our care that may be related to age, sex, race, or geographic location and provide us some avenues to do our best to eliminate these disparities.

Disclosure

The authors report no conflict of interest.

References


Response

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We would like to thank Drs. Sampson, Bagley, and Carson for their excellent in-depth analysis of our study. The current disparities of care faced by minorities are well described in the references cited by Sampson et al., and we agree that there are a number of common factors that lead to disparity of medical care in the minority population as mentioned above. Furthermore, their review of the current literature demonstrates that beyond the common causes, there is a wide spectrum of fundamental factors, many of which are unique to specific disease processes. It is therefore imperative to supplement our identification of an overall tendency for there to be disparities in care faced by minorities with recognition of the disease-specific factors that contribute to the problem. For example, in our work, increased duration of visual symptoms directly correlated with a decreased likelihood of vision returning to the preoperative baseline in our study. Our study has established that nonwhite patients older than 60 years of age have a prolonged duration of symptoms, putting them at a greater risk for permanent visual impairment. Therefore, we should further investigate the factors that may lead to this delay in the specific diagnosis of NFA to overcome the shortcomings of our current health care model, which currently leads to devastating morbidity in this susceptible population.

Several important considerations outside the focus of our study also will warrant additional inquiry. First, as Sampson et al. point out, there may be pharmacogenetic differences between races that could indirectly or directly lead to disparities such as the delay in diagnosis we identified or differences in surgical outcomes identified by others. Second, because our study was a single-center...