Concussion and the neurologist

A work in progress

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In the last 3 decades, the neurology landscape has changed. Once primarily an academic profession with limited treatment options, neurology now is a clinical field with treatments available in the acute care setting. Treatment of an acute ischemic stroke may begin with tissue plasminogen activator given in the emergency room within 4.5 hours of symptoms.¹ This clinical shift now includes the evaluation and management of concussion patients. With the current estimate from the Centers for Disease Control and Prevention being 1.6–3.8 million sports- and recreation-related concussions per year (up from the prior estimate of 300,000), more neurologists will be asked to evaluate these patients.^{2,3}

It is for this reason that the position paper in this issue of *Neurology*® by Kirschen et al.,⁴ “Legal and ethical implications in the evaluation and management of sports-related concussion,” is both timely and relevant. The article reviews the current concussion and privacy laws and how they pertain to the management of the concussed athlete. The authors also review ethical concerns surrounding the treatment of the concussion, including (1) professionalism, (2) informed decision-making and respecting autonomy, (3) beneficence and nonmaleficence, (4) conflicts of interest, and (5) distributive justice. The information is presented as a guide for physicians who treat patients with concussion.⁴

Some of these topics are straightforward and apply to most areas of medicine; others merit further mention as they are unique to the management of the concussed athlete. The federal Health Insurance Portability and Accountability Act (HIPPA) restricts providers from sharing patient health information without the patient’s permission, but this may interfere with patient management. When working with the injured athlete, it is optimal for the physician to work with the coach or school. The athlete or family could refuse to have the assessment released and then “doctor shop” for possible premature clearance. The authors suggest that, when working with athletes, the patient or family ought to sign a HIPPA waiver or a consent that allows the sharing of health information

with the necessary parties to ensure the patient’s safety.⁴

Underreporting of symptoms is another aspect common in athletes. This issue is touched on in the section on privacy laws and also in the section on beneficence and nonmaleficence. In an anonymous survey of a collegiate cohort of 262 athletes, 43% reported that they “knowingly” hid their symptoms from the coach or athletic trainer.⁵ Athletes may not report their symptoms to stay in the contest or in response to external pressures from coaches, teammates, or parents.⁶

In the distributive justice section, the authors suggest that disparities in concussion care may exist due to costs or location; that is, care may be limited in rural or underserved areas. This portion of the article is mostly speculation and touches on the variable availability of care in the United States regardless of diagnosis. This topic is therefore well beyond the scope and purpose of this article. In addition, the authors fail to mention that concussion care has been managed primarily by other subspecialties such as primary care, pediatrics, and psychiatry. An Internet-based survey of 545 family physicians in North Dakota and South Dakota revealed that 94.5% of these physicians were diagnosing and treating concussions, suggesting that, in fact, the rural setting has providers willing to manage this injury.⁷ Athletic trainers, nurse practitioners, and psychologists also play a substantial role in sports concussion management, particularly on the collegiate level. Even with multiple disciplines participating in concussion treatment, it could be argued that with 1.6–3.8 million concussions per year, the lack of access to concussion care may be due to an inadequate supply of providers overall. The limited number of Accreditation Council for Graduate Medical Education–approved neurology training programs in the United States (124 with 228 filled positions in 2010) suggests that neurologists who are available to treat concussion will nevertheless play a small part in this rapidly growing public health concern.⁸ Furthermore, at present there seems to be a paucity of neurologists comfortable with treating concussion patients.

See page 352

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The authors comment on the lack of formal concussion education available in neurology training and remind us of the American Academy of Neurology Code of Professional Conduct that states “the neurologist must practice only within the scope of his/her training, experience, and competence.” Until such training is available, the authors recommend neurologists take additional continuing medical education credits and be familiar with current state laws and concussion guidelines. It is also important to keep in mind that in the average adult neurology program, neurology residents will spend 3 years becoming proficient in disorders of the central and peripheral nervous systems; these disorders are in the differential of most of the symptoms described on the average concussion card.^{9,10} In addition, fellows participating in subspecialty programs such as neurointensive care, neurorehabilitation, and behavioral neurology and neuropsychiatry will have exposure to brain injury patients, including concussion. When it comes to residency and fellowship training, the argument could be made that neurology residents would be the best prepared to treat concussion patients compared to our medicine colleagues.

Overall, the article is a refreshing reminder of the issues surrounding the treatment of sports-related concussion and the need for continued education and research on this topic. The authors recommend the development of a concussion registry in order to track and better understand the natural course of this injury. This would need to be interdisciplinary and in collaboration with other subspecialists already involved in concussion management. The role the neurologist plays will eventually be defined during that process. However, in 2014, there remains an immediate need for providers to treat concussion

patients. The only question you need to answer is what your role will be in supporting this effort.

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