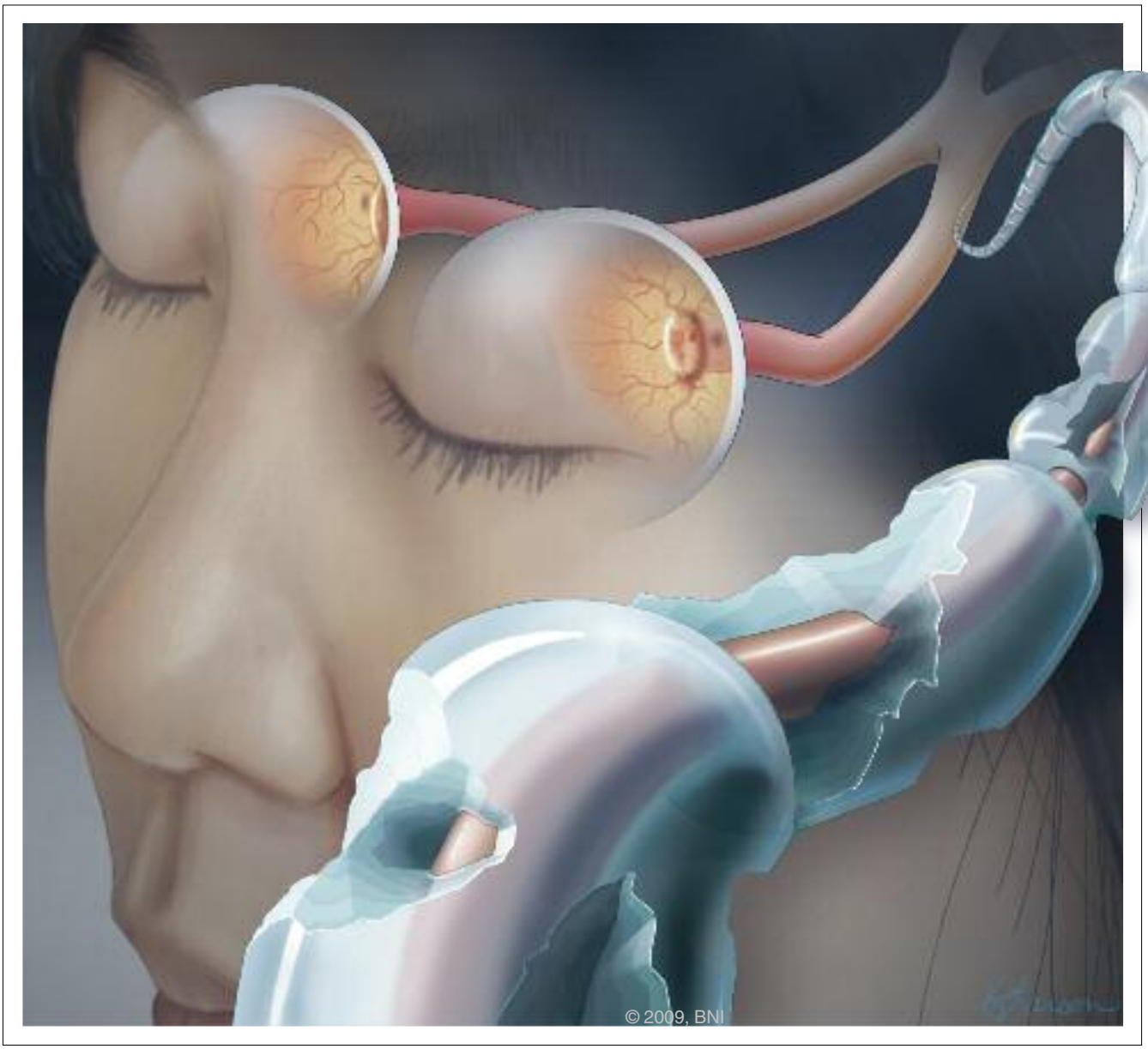
BARROW

QUARTERLY

VOLUME 24 ◊ NUMBER 2 ◊ 2008

BARROW NEUROLOGICAL INSTITUTE OF ST. JOSEPH'S HOSPITAL AND MEDICAL CENTER • PHOENIX, ARIZONA



IMMUNE-MEDIATED DISEASES OF THE NERVOUS SYSTEM

C O M M E N T S

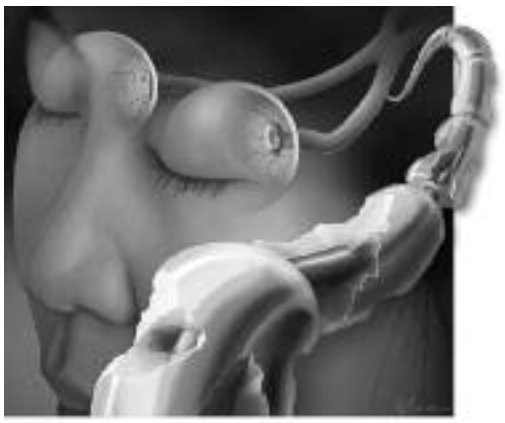
By virtue of the blood-brain barrier, the central nervous system (CNS) is considered a privileged organ and its involvement is often spared in many systemic diseases. Conversely, some conditions develop solely in the CNS that thus becomes the only target of pathologic processes. The high level of complexity of the immune system and the way it interacts with the nervous system have intrigued many researchers and led to the development of a specialized field of medicine—neuroimmunology. Considering the relatively high percentage of human conditions related to altered immunological responses, namely, autoimmunity, the growing interest in improving our understanding of immune-mediated illnesses is not surprising. In the last two or three decades, progress in this field has resulted in a number of new therapies.

Acknowledging these significant advances, the current issue of the *Barrow Quarterly* is entirely dedicated to immune-mediated diseases of the nervous system. First, the characteristics of four autoimmune demyelinating conditions of the CNS are reviewed to underscore their distinguishing features and to provide an update on possible treatments. Multiple sclerosis (MS) is the prototype of autoimmune demyelinating diseases and the most commonly encountered of these diseases in clinical practice. Patients and family members often ask about the genetic predisposition underlying the development of MS. Intensive investigations have been devoted to answering this important question. We now know that the major histocompatibility complex alleles play a role. Furthermore, the picture of a complex trait with multiple genes contributing more or less interactively has emerged, as addressed by Bomprezzi and Craig.

Two case reports complete the overview of the inflammatory diseases of the nervous system. One case involves an unusual presentation of acute peripheral neuropathy combined with demyelinating features of the CNS. This rare entity reflects demyelination in both the CNS and the peripheral nervous system. The second case illustrates the characteristic features of neuromyelitic optica, which although uncommon, represents a real therapeutic challenge for neurologists who care for these patients.

The exciting developments in the field of neuroimmunology promise improved therapies for patients with these devastating diseases and one day perhaps a cure. Until that happy day, clinicians at Barrow are prepared to offer these patients the best care possible. Please consider using the enclosed self-addressed stamped envelope to send a tax-deductible donation that will help us to continue to share advances in all areas of the neurosciences. Thank you.

Roberto Bomprezzi, MD, PhD
Guest Editor



This issue's cover depicts inflammation and demyelination of the optic nerve as found in neuromyelitis optica (NMO). Most common in young adults of Asian and African descent, NMO is characterized by severe recurrent attacks of optic neuritis in addition to episodes of longitudinally extended transverse myelitis. See the articles by Bomprezzi and Campagnolo on page 4 and Postevka et al. on page 17. The illustration is by Kristen Larson.