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Neuroimaging Clinics of North America: Venous Disorders of the Central Nervous System

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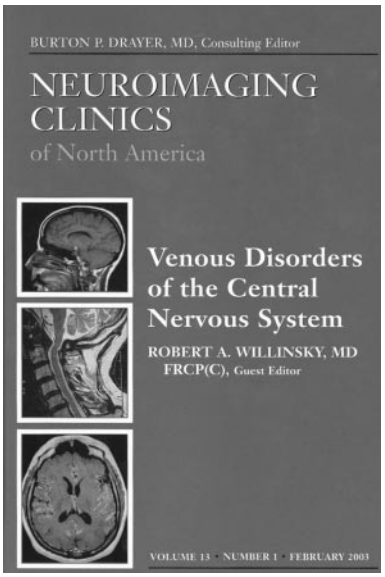
Neuroimaging Clinics of North America: Venous Disorders of the Central Nervous System
Robert A. Willinsky, guest ed. 3rd ed. New York: W. B. Saunders, Vol. 13, No. 1, February 2003.



The goal of *Neuroimaging Clinics of North America* is to "keep practicing radiologists and radiology residents up to date with current clinical practice in radiology by providing timely articles reviewing the state of the art in patient care." This current issue highlights venous disorders of the central nervous system and reviews the features of venous congestive encephalopathy and myelopathy in terms of its pathophysiology and imaging findings. It serves to highlight the role of the venous system in the brain and spinal cord and discusses new noninvasive techniques for venous system imaging. In addition, this book explores the spectrum of congenital and acquired pathology in the venous system in both the pediatric and adult populations.

Specific chapters are devoted to the relationship between facial vascular malformations, venous anomalies, and cerebral blood flow, and the volume includes the complex interactions between the venous system, intracranial shunts, cerebrospinal circulation, and the hemodynamic balances within the brain and spinal cord. A discussion of the clinical features and the medical and surgical management of venous occlusive disease is also given, and in general the illustrations are adequate.

Overall, this book is fairly well organized, beginning with imaging and anatomy of the normal intracranial venous system, followed by venous variations, intracranial cavernous malformations, pediatric hydrovenous disorders from arteriovenous fistulas (AVFs), venous congestive encephalopathy related to dural AVFs, venous manifestations of spinal cord AVFs, radiologic findings of brain AVFs, sinus thrombosis in children, and, finally, cerebral venous thrombosis in adults. This book has extensive illustrations of CT, MR, and angiographic findings for each condition, although it lacks sufficient labels of the normal and abnormal findings for each illustration.

One of the main criticisms of this textbook is that the internal organization within each chapter is not consistent. The last two chapters on venous thrombosis in children and adults are nicely arranged, with epidemiology, anatomy and physiology, pathophysiology, clinical features, risk factors, imaging, and treatment. The prior chapters, however, lack this orderly approach. The chapter on venous compartments of brain arteriovenous shunts, in particular, lacks many of these key topics. This chapter is filled with many illustrations, but lacks adequate pathologic correlation, contains no discussion of treatment with endovascular techniques, and could be better organized in terms of a classification scheme based on location, pathology, and clinical presentation.

In addition, there is a lack of anatomic and pathologic correlation within each book chapter, which would significantly improve the scientific basis for many of the conditions described. Although there is some discussion regarding clinical presentation, there is lack of adequate information regarding treatment options for many of these diseases, which would significantly improve the information for both clinicians and interventional radiologists interested in this subject. Because the primary audience is the practicing diagnostic radiologist, an in-depth review of treatment options is probably beyond the scope of this series.

Specific suggestions that would have helped to improve some of these chapters would have been diagrams and line drawings of the normal anatomy, anatomic variants, and the different diseases of the dural sinuses and veins, correlated with the submitted MR findings as well as comparisons with CT angiograms and conventional digital subtraction angiograms, plus labels applied directly to each illustration. Conspicuously absent, except for two color pictures on the topic of cavernous malformations, are the histologic and pathologic findings for each of the listed disease processes in this text.

In the chapter on spinal cord AVFs, much of the data reported are from personal experience of the authors from a limited series of cases. A broader review of the published literature, particularly in reference to the clinical history, presenting symptoms, and natural history, would have been preferable.

In summary, this short monograph provides an overview for the diagnostic radiologist and radiology resident on central nervous system venous disorders. Its main goal is to broadly "refresh" the reader on the subject of venous disease. It does not, however, provide the necessary in-depth review or contain sufficient discussion about specific diseases that would be needed for a more intense scientific review of this topic.