Neuromuscular imaging, Eds. Mike P. Wattjes and Dirk Fischer

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Diagnosing patients with neuromuscular diseases can be challenging and is often based on the clinical presentation, electrodiagnostic testing, muscle biopsy, and genetic testing. New imaging possibilities for diagnosis and monitoring have, however, been developed and fine-tuned in recent years. *Neuromuscular Imaging*, a new handbook edited by Mike P. Wattjes and Dirk Fischer, offers an excellent overview of these new developments and of the various uses of imaging in neuromuscular disorders. While imaging of peripheral nerve and muscle is routinely performed in patients with suspected neuromuscular tumors, it is most likely underused in neuromuscular disorders such as hereditary myopathies, peripheral nerve disorder, and motor neuron disorder. This book will therefore certainly be a useful guide for the use of various imaging modalities, not only in the diagnostic work-up, but also for prognostic purposes and the monitoring of therapy.

After an introductory chapter which outlines some technical aspects of the different imaging modalities, the second chapter is devoted to the normal muscle anatomy and physiology. It contains a very didactic atlas of topographical muscle anatomy as appearing on T1-weighted axial MRI images. The

following chapters deal with the clinical applications of imaging in hereditary and acquired myopathies, neuropathies, and motor neuron disorders. The material is clearly presented per disorder, with information on genetics, histopathology, clinical presentation as well as up-to-date imaging findings. This enables the reader to both quickly browse the information and to look up more detailed findings.

Specific involvement or sparing of certain muscles on neuroimaging has proven to be most useful in the diagnosis of various forms of myopathies and may help to guide or prioritize genetic testing. The diagnostic algorithms based on pattern recognition of muscle involvement are described in detail.

In neurogenic disorders too, the imaging toolbox is expanding and provides us with non-invasive ways of identifying nerve damage. Although this book is an outstanding summary of the existing applications of neuromuscular imaging, many applications have not yet become daily clinical practice and their relative value over, on the one hand, routine tests such as muscle biopsy and electrodiagnostic testing and, on the other hand, the diagnostic possibilities offered by next-generation sequencing remains to be established.

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