

Clinical Nuclear Medicine Neuroimaging - An Instructional Casebook

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This interesting and informative booklet documents the resurgence of nuclear neuroimaging. The book has eight chapters mainly focusing on PET and SPECT for dementia and epilepsy in the first 4 chapters. It starts from normal distribution of tracer going from easy to advanced/complex cases, with detailed instruction about imaging color selection, reorientation, and appropriate displays prior to interpretation. Although the entire book emphasizes the importance of hand-on direct visual imaging analysis, chapter 4 devotes most of its content to the exceptional value of computed SISCOM (subtraction of ictal study co-registered to MR imaging) in presurgical localization of an epileptogenic focus/zone. Chapter 5 reiterates the value of FDG PET in brain primary tumors and metastases. Each case begins with chief complaint (CC), followed by pertinent clinical information, key imaging findings from whole set of 3D volumes in orthogonal slice, and discussion with follow up, and concludes with case summary. Chapter 6 is DaTScan using SPECT for Parkinsonian disorders. The rest of chapters have conventional and commonly performed general nuclear medicine studies related to neurology in terms CSF flow, leak, and shunt applicable in various conditions such as NPH, brain trauma and surgery, brain death and brain perfusion applicable in cerebrovascular reserve and WADA test. Some examples of imaging protocols are included in the appendices. Self-assessment quizzes are useful for clinical teaching and preparation of board examinations. The collection of references is a good resource for further reading. Certainly, the actual practice of nuclear neuroimaging can be adopted in each particular institution for care of patients as nuclear imaging can be individualized by each situation. Like WADA test, it can be injected intravenous or intra-arterially during the angiogram with a suppressing drug. Seizure localization may be performed in ictal or inter-ictal state. Overall, this is a concise and useful summary of the current status of nuclear neuroimaging which is worthwhile considerations for nuclear medicine physicians, diagnostic radiologists, technologists, and medical trainees who practice clinical nuclear medicine. It is a must-have reference for any nuclear medicine clinic.

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