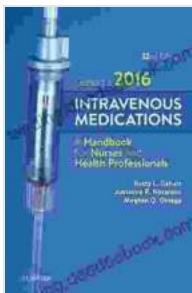


Video Atlas of Neurophysiological Monitoring in Surgery of Infiltrating Brain Lesions: A Comprehensive Guide

Infiltrating brain lesions, such as gliomas and other tumors, pose significant challenges for surgeons due to their complex and often diffuse nature. To ensure optimal surgical outcomes and minimize the risk of neurological deficits, intraoperative neurophysiological monitoring (IONM) has become an essential adjunct to surgical procedures.



Video Atlas of Neurophysiological Monitoring in Surgery of Infiltrating Brain Tumors by Adolph Barr

★★★★☆ 4.7 out of 5

Language : English
File size : 6653 KB
Text-to-Speech : Enabled
Screen Reader : Supported
Enhanced typesetting : Enabled
Print length : 88 pages



The Video Atlas of Neurophysiological Monitoring in Surgery of Infiltrating Brain Lesions is an invaluable resource for surgeons, neurologists, and researchers seeking to enhance their understanding and proficiency in this complex and specialized field. This comprehensive guide provides a detailed overview of IONM techniques, surgical strategies, and patient outcomes, supplemented with high-quality video footage that brings the intricacies of these procedures to life.

Overview of IONM Techniques

IONM involves the use of specialized techniques to monitor and assess the functional integrity of the nervous system during surgery. The primary goal is to identify and preserve critical neural structures, such as eloquent cortex, white matter tracts, and cranial nerves, during tumor resection.

IONM techniques include:

- **Electroencephalography (EEG):** Measures electrical activity in the brain
- **Electromyography (EMG):** Measures electrical activity in muscles
- **Somatosensory evoked potentials (SSEPs):** Measure electrical responses in the sensory pathways
- **Motor evoked potentials (MEPs):** Measure electrical responses in the motor pathways

Each of these techniques provides unique information about the functional status of specific neural structures, allowing surgeons to make informed decisions during surgery and minimize the risk of neurological complications.

Surgical Strategies in Infiltrating Brain Lesion Surgery

The surgical approach to infiltrating brain lesions depends on the location, size, and extent of the lesion. The Video Atlas of Neurophysiological Monitoring in Surgery of Infiltrating Brain Lesions covers various surgical strategies, including:

- **Awake craniotomy:** The patient is awake during surgery to perform language and motor tasks, providing real-time feedback to assist in

functional mapping and resection

- **Functional MRI (fMRI):** Preoperative fMRI scans can help identify eloquent cortex and plan surgical approaches
- **Diffusion tensor imaging (DTI):** Preoperative DTI scans can visualize white matter tracts and assist in surgical planning
- **Fluorescence-guided surgery:** Uses fluorescent dyes to enhance visualization of tumor margins

The choice of surgical strategy is tailored to the individual patient and the characteristics of the lesion.

Patient Outcomes and Prognosis

IONM has been shown to improve patient outcomes and prognosis after surgery for infiltrating brain lesions. Studies have demonstrated that IONM can reduce the risk of postoperative neurological deficits, such as motor weakness, sensory loss, and language impairment.

The Video Atlas of Neurophysiological Monitoring in Surgery of Infiltrating Brain Lesions provides detailed case studies and long-term outcome data, highlighting the benefits of IONM in enhancing surgical outcomes and preserving patient function.

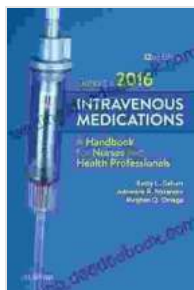
The Video Atlas of Neurophysiological Monitoring in Surgery of Infiltrating Brain Lesions is an essential resource for surgeons, neurologists, and researchers involved in the care of patients with these complex lesions. This comprehensive guide provides a detailed overview of IONM techniques, surgical strategies, and patient outcomes, supplemented with

high-quality video footage that brings the intricacies of these procedures to life.

By mastering the principles and techniques described in this atlas, clinicians can significantly enhance their ability to perform safe and effective surgery for infiltrating brain lesions, maximizing patient outcomes and preserving neurological function.

References

- Lüders, H., & Schomer, D. L. (2018). Lüders and Schomer's atlas of electroencephalography: Clinical applications. Cambridge University Press.
- DeWitt, L. D., & Rossi, S. F. (2019). Intraoperative monitoring techniques in neurosurgery: A practical guide. Springer.
- Shimony, J. S., & Berger, M. S. (2011). Intraoperative neurophysiological monitoring in glioma surgery. *Neurosurgical Focus*, 30(2),E1.

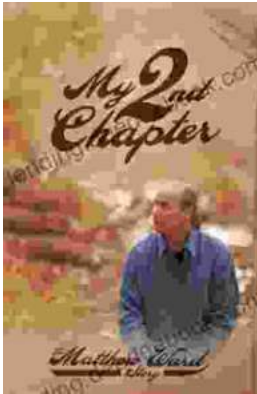


Video Atlas of Neurophysiological Monitoring in Surgery of Infiltrating Brain Tumors by Adolph Barr

★★★★☆ 4.7 out of 5

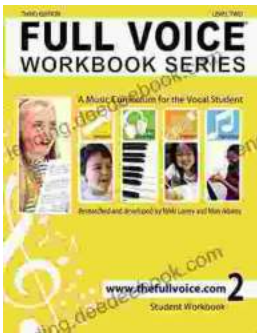
Language : English
File size : 6653 KB
Text-to-Speech : Enabled
Screen Reader : Supported
Enhanced typesetting : Enabled
Print length : 88 pages





My Second Chapter: The Inspiring Story of Matthew Ward

In the tapestry of life, where threads of adversity often intertwine with the vibrant hues of triumph, there are stories that have the power to ignite our spirits and...



Full Voice Workbook Level Two: A Comprehensive Guide to Advanced Vocal Technique

The Full Voice Workbook Level Two is a comprehensive resource designed to help singers develop advanced vocal techniques and expand their vocal range. As a sequel to the...