Neurological Diseases and Pregnancy

A Coordinated Care Model for Best Management

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The vibrant cover of the book under review itself speaks volumes about the indispensable link between neurological diseases and pregnancy. It is thought-provoking and motivates the reader to sift through the pages and develop a better understanding of the significant yet overlooked subject.

The book is filled with detail, insight and comprehensive knowledge regarding neurological diseases that may occur or exacerbate in the pregnant woman. As this portion of obstetrics is often neglected in most of the available textbooks, it is noteworthy that this book gives a complete overview of such conditions. The language of the book is easy to understand and keeps the interest building.

SECTION 1: Addresses reproductive issues in women with neurologic disease including issue pregnancy safety and termination, contraception options and the effects on Immune and Nervous Systems. Radiological concerns have also been addressed in this section.

SECTION 2: It also addresses central nervous system related neurologic diseases, neurologic infections, different types of headaches as well as trauma related neurologic consequences as well as intracerebral vascular lesions and their management.

SECTION 3: It deals with epilepsy, seizure, and sleep disorders and the medications effects on fetus, neonate, and lactation. Postpartum care including sleep disorders have been discussed.

SECTION 4: Deals with neuromuscular, spinal cord, and metabolic disorders including diseases related to these systems; e.g. myasthenia gravis, spinal muscular atrophy, muscular dystrophies and many other similar diseases.

SECTION 5: Delivery and postpartum period care has been addressed.

The first chapter of this compilation was most appealing for me as it gave me a bird's eye view of all the neurological diseases. As we proceeded into the next chapters, we really enjoyed the detailed discussion on every aspect of disease including contraception.

Having gone through the first few chapters, we felt that the readers would have been able to maintain more interest if the details were provided in a more precise manner as it was difficult to focus on and retain all the information in chapters such as: Fetal Imaging for the Neurologist, Radiation Exposure and Neuroimaging, and Cognitive Changes in Pregnancy. On the contrary, the chapter on Prenatal Genetics for Women with Neurological Disease provided adequate and precise information about screening and prenatal diagnosis according to recent guidelines.

The latter part of the book contained up-to-date clinical overview of various diseases in adequate details. Compared to the first half, this half was more concise and reader-friendly, particularly topics on ischemic and haemorrhagic stroke and its management in pregnancy as well as the chapter which provides insight into the symptoms and management of complications that may arise secondary to anesthetic interventions in pregnancy.

We found the section on delivery and postpartum management very interesting, clinically applicable and felt that it covers all relevant aspects of intrapartum and postpartum care and complications very precisely. Generally speaking, the book is an excellent compilation of knowledge and a brilliant read, especially for healthcare professionals aspiring to pursue their career in Obstetric Neurology and I would most definitely recommend it.

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book review

The Spine Handbook

Editor: Mehul J. Desai
Associate Editor: Joseph R. O'Brien
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Conventional textbooks are considered vital in the teaching and learning process however in this information age or the Internet it is utterly impossible for published material to compete with online resources. Any attempt at compiling and publishing a conventional reader friendly book with new information remains a challenge. The Spine Handbook, edited by Dr. Desai, proves that textbooks remain an invaluable resource despite the Internet. He & Dr. O'Brien have made a tremendous effort to bring together specialists from around the world and compile a book which covers interdisciplinary approach towards the management of patients with spine pathologies.

This book is an excellent attempt to cover all topics related to assessments, diagnostic tools, conservative, interventional & surgical treatment of various spinal disorders. The book has 33 chapters in six sections and contributed by 81 authors who highlighted principles & practice of spinal pain management for all spine care providers.

Three chapters in Section 1 highlight a methodical approach to patients with spine pathology including history, physical examination and imaging. Key clinical tests are well explained with the help of colored photographs. Understanding the intricacies of advance imaging is well narrated to help physician making an optimal choice. We are particularly impressed with a chapter on “behavioral assessment of spine patients”. This important aspect is usually overlooked in clinical practice & training programs. The author clearly narrated the importance of behavioral assessment with special strategies to be integrated into treatment plan with relevant evidence.

Section 2 “Cervical Spine” has five chapters covering cervical disc disease, facet dysfunction, spinal stenosis, cervical trauma and degenerative conditions. Each of these chapters is further organized into sub-sections covering fundamental understanding of anatomy and evidence based management options for using strategies (diagnostic & treatment) to minimize risk of potential complications. There is also a succinct coverage of cervical spine trauma with recent recommendations.

Section 3 provides updated insight on relatively rare “Thoracic Spine” area in four chapters covering thoracic disc disease, facet dysfunction including costo-transverse joint pathology, spinal stenosis and intercostal neuralgia. The use of clinical reasoning in the absence of definitive diagnostics and use of latest algorithmic guide to diagnose thoracic pain are emphasized.

Section 4 on “Lumbar Spine” has six chapters covering lumbar disc disease, facet arthropathy, spondylolisthesis, lumbar stenosis, radiculopathy and surgical approaches for stenosis. Once again, each chapter is thoughtfully organized into several sub-sections covering all possible multidisciplinary approaches for common low back pain pathologies. Common surgical approaches based on recent evidences are discussed for some common degenerative lumbar spinal diseases.

The last two sections “5 and 6 “ deal with Emerging and Special issues and Neuro-modulation. In section 5, wide variety of different topics are covered in twelve chapters highlighting sacroiliac joint dysfunction, spinal tumor, uncommon pelvic pain and open versus minimally invasive surgery. This section also focuses new advancement in interventional pain management using ultrasound, regenerative therapy & platelets rich plasma injections. The chapter on “opioids in spinal pain” emphasizes on maximizing non-opioids options as a first line of treatment in spinal pain based on a new emerging guidelines on opioid use in non-malignant spinal pain.

Last section has three chapters & is dedicated to “Neuro-modulation”. This section covers common minimally invasive techniques of neuro-modulation. Patient selection, choice of agent and route of delivery are highlighted in the chapter of "Intrathecal Pumps".
In the chapter of “spinal cord stimulation” a detailed technological innovations and recent advancement are well described for its use in refractory neuropathic pain. The last chapter of the book “Peripheral Nerve Stimulation” increases the awareness of the theory, basic science and clinical indication of this new technology is highlighted in clinical scenarios.

Overall the book provides a comprehensive knowledge on the latest principles & practice of spinal pain management. It is well organized with thoughtful sequence and in an easy to follow format. At the end of each chapter, is a comprehensive list of references for further reading. Simple tables, figures, plenty of images and illustrations aid the text of each chapter. We are highly impressed with the quality of images especially of fluoroscopy guided. The authors have also touched some controversial issues and explained both sides of the argument by providing evidence. We are confident that this book provides a practical approach for both students and physicians going through the book.

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Intensive Care needs to be Intensive

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A male patient, 58 y, was admitted with intentional overdose by 30 tabs of flecainide 100 mg- Past medical history; pacemaker, AF-previous ablation, EF - 50%. Medications: flecainide, ramipril, bisoprolol, rivaroxaban.

On his arrival to A&E department, his parameters were; GCS - 15/15; HR - 60/min; BP - 92/67 mmHg and cool extremities. CRT-3 secs; ABG’s showed mixed acidosis; ECG showed wide QRS complex. He was resuscitated with IV fluids 4.5 L. He remained bradycardic and hypotensive, so received atropine and was started on metaraminol infusion. He was then transferred to ICU for observation and further management. He was stable on arrival to ICU. His initial management was guided by TOXBASE experts, who suggested to give boluses of NaHCO₃ 8.4% to bring the QRS time down to less than 120 ms to avoid life threatening arrhythmias. Patient was given multiple boluses of soda bicarb but QRS came down to 150 ms only (from 180 ms initial value). Every bolus was followed by a 12 lead ECG. Role of hemofiltration was also discussed but found to have no role in flecainide. An urgent Echo showed EF-25-30%. He was then started on dobutamine infusion. After 36 hours of ingestion, patient became quite agitated and restless and went into VT and then VF requiring multiple shocks. At this stage he was intubated and ventilated. The role of use of Intralipid was discussed but it was decided to leave it for any subsequent life threatening arrhythmia or cardiac arrest. Cardiologist’s opinion was sought at this stage who suggested to replace dobutamine infusion with enoximone. Option of overdrive pacing was also discussed with the cardiologist but he didn't suggest it. The patient was later on started on beta-blocker and ACE inhibitor. He remained in fast AF despite of all these medication with HR 110-130/min. He also required noradrenaline infusion for his BP which was then gradually weaned off. QRS became within normal limits after 72 hours. His repeat Echo showed an improvement in EF to 40%. He became more stable hemodynamically, therefore the decision was made to wean him off the ventilator. He was extubated after 6 days of total stay but had to be re-intubated due to extreme agitation, restlessness and instability. It was then decided to do a percutaneous tracheostomy and then wean him off the ventilator slowly which was carried out successfully at the end.