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## **Intracranial Pressure and Brain Monitoring XIII: Mechanisms and Treatment (Acta Neurochirurgica Supplementum), Supplement 102**

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## BOOK REVIEW

### Intracranial Pressure and Brain Monitoring XIII: Mechanisms and Treatment (*Acta Neurochirurgica Supplementum*), Supplement 102

G.T. Manley, C. Hemphill, and S. Stiver, eds. New York: Springer Wien; 2009, 448 pages, 150 illustrations, \$359.00.

This 440-page volume from Springer, which is published as a supplement to *Acta Neurochirurgica*, consists of the proceedings of the ICP13 congress held in San Francisco in 2007. Both Springer and the authors should be congratulated for the outstanding presentation and readability of the book,

which is enhanced by numerous figures and graphics. The quality of the submissions is high, but the reader's interest for neuroradiology may be quite limited (eg, the section on cerebrovascular reactivity and Part 6 on brain compliance biophysics and biomechanics), though there is an interesting chapter on the radiology of the "syndrome of the trephined," an increasingly important problem in modern neuroradiology and

neurosurgery practice, with increased use of decompressive craniotomy.

The section of major interest to the neuroradiologist is "Part 5: Neuroimaging" and "Part 2: Hydrocephalus and CSF Dynamics." There is a useful chapter on evaluation of cranial CT perfusion in patients undergoing acute neurosurgical procedures. Possibly the most important contribution in the book is a chapter on MR imaging measurement of blood and CSF flow rates with phase-contrast techniques, providing normal values and CO<sub>2</sub> reactivity (p. 263). The use of transcranial Doppler in neurointensive care is covered in several different chapters, especially in Part 3 in the advanced neuromonitoring section.

The book is contemporary and contains some provocative laboratory studies. For example, there is an evaluation of the role of melatonin in both traumatic brain injury and subarachnoid hemorrhage models in the rat. Also, possibly the most interesting experimental studies are . . . "DNA vaccination against neurite growth inhibitors enhances functional recovery following traumatic brain injury," and one on the role of the aquaporin channel highlighting its role in mediating brain edema. Thus, this publication provides the interested reader with a contemporary review of this important topic. The volume as a whole is well referenced and laid out for the reader.

It is most strongly recommended for the academic neuro-radiologist, and provides a very useful compilation of current research on the topics of brain edema, mechanisms of brain damage, and neuromonitoring and neuroradiology techniques.

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