

A. Alexandre  
M. Masini  
P. P. M. Menchetti  
*Editors*

# Advances in Minimally Invasive Surgery and Therapy for Spine and Nerves



# **Contents**

<b>Surgical Anatomy of the Sacral Hiatus for Caudal Access to the Spinal Canal .....</b>	1
Andrea Porzionato, Veronica Macchi, Anna Parenti, and Raffaele De Caro	
<b>Radiologic Anatomy of the Sacral Canal .....</b>	5
Veronica Macchi, Andrea Porzionato, Aldo Morra, Carla Stecco, and Raffaele De Caro	
<b>Imaging in Degenerative Spine Pathology .....</b>	9
Cesare Colosimo, Simona Gaudino, and Andrea M. Alexandre	
<b>Operative Management of Lumbar Disc Herniation .....</b>	17
F. Postacchini and R. Postacchini	
<b>Philosophy and Concepts of Modern Spine Surgery .....</b>	23
Soriano-Sánchez José-Antonio, Marcos Baabor-Aqueveque, and Francisco Silva-Morales	
<b>Minimally Invasive Treatment for Refractory Low Back Pain, Targeted by Epidural Endoscopy with O<sub>2</sub>/O<sub>3</sub> and Steroid Therapy .....</b>	33
Marcos Masini and Aldo Calaça	
<b>Epidural Injections: Past, Present and Future .....</b>	39
Marcos Masini	
<b>Long Term Intrathecal Infusion of Opiates for Treatment of Failed Back Surgery Syndrome .....</b>	41
Nilton Alves Lara Jr., Manoel J. Teixeira, and Erich T. Fonoff	
<b>Modic Changes: Anatomy, Pathophysiology and Clinical Correlation .....</b>	49
C.C. Quattrocchi, A.M. Alexandre, G.M. Della Pepa, R. Altavilla, and B.B. Zobel	
<b>Periduroscopy: General Review of Clinical Features and Development of Operative Models .....</b>	55
W. Raffaeli, D. Righetti, J. Andruccioli, and D. Sarti	
<b>The Effectiveness of Endoscopic Epidurolysis in Treatment of Degenerative Chronic Low Back Pain: A Prospective Analysis and Follow-up at 48 Months .....</b>	67
A. Di Donato, C. Fontana, R. Pinto, D. Beltrutti, and G. Pinto	

---

<b>Endoscopic Approaches to the Spinal Cord .....</b>	75
Erich Talamoni Fonoff, William Omar Contreras Lopez, Ywzhe Sifuentes	
Almeida de Oliveira, Nilton Alves Lara, and Manoel Jacobsen Teixeira	
<b>Application of Pulsed Radio Frequency to the Dorsal Horn and Dorsal Roots .....</b>	85
Omar Omar-Pasha MD	
<b>Automated Nucleotomy and Nucleolysis with Ozone .....</b>	97
Marcos G. Baabor, Pedro F. Vázquez, and José A. Soriano Sánchez	
<b>Treatment of Discogenic Low Back Pain with Intradiscal Electrothermal Therapy (IDET): 24 Months Follow-Up in 50 Consecutive Patients .....</b>	103
Roberto Assietti, Mario Morosi, Giovanni Migliaccio,	
Luigi Meani, and Jon E. Block	
<b>Percutaneous Coblation Nucleoplasty in Patients with Contained Lumbar Disc Prolapse: 1 Year Follow-Up in a Prospective Case Series .....</b>	107
Tariq Sinan, Mehraj Sheikh, Josip Buric, Khalida Dashti, and Ali Al-Mukhaimi	
<b>Plasma-Mediated Disc Decompression for Contained Cervical Disc Herniation: Results Through 5 Years .....</b>	113
Alessandro Cesaroni and Pier Vittorio Nardi	
<b>Percutaneous Laser Discectomy: Experience and Long Term Follow-Up .....</b>	117
P.P.M. Menchetti, G. Canero, and W. Bini	
<b>Mechanism of Action of Oxygen Ozone Therapy in the Treatment of Disc Herniation and Low Back Pain .....</b>	123
Emma Borrelli	
<b>Treatment of Symptomatic Lumbar Spinal Degenerative Pathologies by Means of Combined Conservative Biochemical Treatments .....</b>	127
A. Alexandre, L. Corò, R. Paradiso, R. Dall'Aglio,	
A.M. Alexandre, F. Fraschini, and P.G. Spaggiari	
<b>Oxygen–Ozone Therapy for Degenerative Spine Disease in the Elderly: A Prospective Study .....</b>	137
Matteo Bonetti, Alessandro Fontana, Francesco Martinelli, and	
Cosma Andreula	
<b>Ozone the One and Only Drug .....</b>	143
Pepa Osvaldo Alberto	
<b>Vertebral Augmentation: 7 Years Experience .....</b>	147
Giovanni Carlo Anselmetti, Giuseppe Bonaldi, Paolo Carpegniani,	
Luigi Manfrè, Salvatore Masala, and Mario Muto	
<b>Kyphoplasty in the Treatment of Osteoporotic Vertebral Compression Fractures (VCF) .....</b>	163
Guillermo Saul Fernandez Molina, A. Campero, R. Feito, and S. Pombo	
<b>Experience with Coflex Interspinous Implant .....</b>	171
F. Villarejo, F. Carceller, A. Gómez de la Riva, and M. Budke	
<b>DIAM Device for Low Back Pain in Degenerative Disc Disease .....</b>	177
Josip Buric, Massimiliano Pulidori, Tariq Sinan, and Sheikh Mehraj	

---

<b>Percutaneous Surgical Treatment in Lumbar Spinal Stenosis with Aperius™-PercLID™: Indications, Surgical Technique and Results .....</b>	183
P.P.M. Menchetti, F. Postacchini, W. Bini, and G. Canero	
<b>Six Level Cervico-Thoracic Circumferential Reconstruction: Report of the Second Case of the Literature .....</b>	187
Visocchi Massimiliano, Md and Maira Giulio, Md	
<b>Percutaneous Vertebral Augmentation: StabiliT™ A New Delivery System for Vertebral Fractures .....</b>	191
Scott C. Robertson MD, FACS	
<b>Minimally Invasive Disc Preserving Surgery in Cervical Radiculopathies: The Posterior Microscopic and Endoscopic Approach .....</b>	197
Angelo Franzini, Giuseppe Messina, Paolo Ferroli, and Giovanni Broggi	
<b>The Fullendoscopic Anterior Cervical Fusion: A New Horizon for Selective Percutaneous Endoscopic Cervical Decompression .....</b>	203
S. Hellinger	
<b>Leucocyte-Platelet Haemocomponents for Topical Use: Regenerative Potentiality ....</b>	209
Gaetano Caloprisco and Alessio Borean	
<b>Current Surgical Options for Articular Cartilage Repair .....</b>	213
G.M. Peretti, A. Pozzi, R. Ballis, D. Deponti, and F. Pellacci	
<b>Facial-Hypoglossal Nerve End-to-Side Neurorrhaphy: Anatomical Study in Rats .....</b>	221
Liverana Lauretti, Manuela D'Ercole, Gilda Masi, Mariano Socolovsky, and Eduardo Fernandez	
<b>Anatomic Study in Cadaver of the Motor Branch of the Musculocutaneous Nerve ...</b>	227
Alberto Isla and Julio Pozuelos	
<b>Exposure of the Sciatic Nerve in the Gluteal Region Without Sectioning the Gluteus Maximus: An Anatomical and Microsurgical Study .....</b>	233
Mariano Socolovsky, Lucas Garategui, Alvaro Campero, Horacio Conesa, and Armando Basso	
<b>Experimental and Clinical Employment of End-to-Side Coaptation: Our Experience .....</b>	241
P. Tos, S. Geuna, I. Papalia, L.G. Conforti, S. Artiaco, and B. Battiston	
<b>Considerations on the Treatment of Anterior Interosseous Nerve Syndrome .....</b>	247
A. Alexandre, A.M. Alexandre, and A. Zalaffi	
<b>Percutaneous Balloon Compression of the Gasserian Ganglion for the Treatment of Trigeminal Neuralgia: Personal Experience of 206 Patients .....</b>	251
Marcos G. Baabor and Leonel Perez-Limonte	
<b>Erratum .....</b>	E1
<b>Author Index .....</b>	255
<b>Subject Index .....</b>	257