

Table of Contents

Preface, Committees

Chapter 1: Materials and Technologies in the Stomatology Practice

Effect of PEG Content on the Mechanical Properties of Bis-GMA/TEGDMA/UDMA Dental Resin Composites

T. Gherman, M. Moldovan, M. Filip, T. Ancua, M. Râpă and S. Cuc 3

Finite Element Analysis of Mechanical Behavior of Restored Maxillary and Mandibular Deciduous Incisors

F. Baciu, A. Rusu-Casandra and C. Bratosin 11

SEM Analysis of the Interface of Five Adhesive Systems

D. Sucala, C. Sarosi, S. Cuc, M. Moldovan and C. Popa 18

Analytical Approaches for Characterization of Teeth Whitening Gels Based on Natural Extracts

M. Filip, L. Silaghi-Dumitrescu, D. Prodan, C. Sarosi, M. Moldovan and I. Cojocaru 24

Associated Titanium Mesh and Native Bone Cranioplasty in Posttraumatic Reconstruction of Frontal Skull Defects

V. Săceleau, E.T. Tălvan, M.I. Făgețan, C. Mohor and A.V. Ciurea 29

The Efficiency of Endodontic Retreatment through Direct Crown Access

M.G. Popescu, D. Marian, T. tefănescu, A. Antoniac, T.E. Lucaci Lupulescu, R. Elisei and E. Vasca 35

The Assessment of Acrylic Infantile Overdenture during the Treatment of Anodontia in Children: A Case Study

A. Porumb, A. Almasi, S. Cavalu and C. Ratiu 41

Chapter 2: Materials and Clinical Practice in Gynecology and Urogynecology

Painful Complications after Pelvic Floor Reconstructive Surgery in Transobturator Suburethral Vaginal Slings

M. Bo, S. Vlădăreanu, R. Vlădăreanu, R. Petca, M. Zvâncă, D.C. Radu and A. Petca 49

Suture Materials and Technics, Possible Cause for C-Section Scar Defect

A. Petca, D.C. Radu, M. Zvâncă, B. Mastalier-Manolescu, R. Petca and M. Bo 54

Synthetic Mesh Used in Gynecologic Reconstructive Surgery for Pelvic Floor Disorders

E. Brătilă, P. Brătilă, D. Comandau, M. Cîrstoiu, R. Bohilea, M. Bo and C. Mehedinu 59

The Use of Mersilene Tape in Transabdominal Cerclage

C. Mehedinu, A.M. Rotaru, M. Antonovici, M. Plotogea, E. Brătilă, R. Bohilea, C. Berceanu and O. Ionescu 64

Properties Analysis of Biological Grafts Used in Pelvic Surgery

E. Brătilă, P. Brătilă, D. Comandau, M. Cîrstoiu, R. Bohilea, M. Bo and C. Mehedinu 71

Chapter 3: Materials and Clinical Practice in Bone Restoration and Prosthetics

Mechanical Aspects of Self-Alignment Mechanism in Hip Bipolar Hemiarthroplasty

D.I. Stoia, C. Vigaru, L. Rusu, H. Hărăgus and S. Damian 81

Investigation of Biodegradation Behavior of an Mg-1Ca Alloy during *In Vivo* Testing

R. Adam, H. Orban, L. Dragomir, C. Milea, I. Antoniac and A. Barbilian 87

Simulation of the Upper Limb Recovery Exercises during Physical Therapy Rehabilitation

L. Rusu, D.I. Stoia and C. Vigaru 93

Advanced Engineering in Orthopedic Surgery Applications

D. Popescu, D. Lăptoiu, R. Marinescu, A. Hadar and I. Botezatu 99

Titanium Mesh Implants - Alternative for Cranial Bone Defects D.M. Teleanu, A. Cristescu, S. Bogaciu, R.I. Teleanu and A.V. Ciurea	105
Failure Modes of the Biometallic Materials - Case Study B. Ghiban	111

Chapter 4: Advanced Technological Processes in the Biomedical Manufacturing

Three-Dimensional Accuracy Evaluation of Two Additive Manufacturing Processes in the Production of Dental Models A.V. Burde, C. Gasparik, S. Baciu, M. Manole, D. Dudea and R.S. Câmpian	119
Technological Progress in Manufacturing Electrospun Nanofibers for Medical Applications L.R. Manea, A. Popa and A. Bertea	126
Medical Applications of Functional Electrospun Nanofibers - A Review L.R. Manea, A. Popa and A.P. Bertea	132