

Contents

Part I Introduction

Historical Background, Anatomy and Function, Etiology and Epidemiology	3
Caroline Keyzer	

Part II Treatment Approaches and Issues in Patients with Suspected Acute Appendicitis

Clinical Presentation of Acute Appendicitis: Clinical Signs—Laboratory Findings—Clinical Scores, Alvarado Score and Derivate Scores.	13
David J. Humes and John Simpson	

Appendicitis Perforation Rates and Time Interval between Symptom Onset and Surgery	23
Tehillah S. Menes and Nina A. Bickell	

Negative Appendectomy Rate and Implications of Removing a Normal Appendix.	35
Wim T. van den Broek	

Laparoscopy and Laparotomy	45
Ravikrishna Mamidanna and Omar Faiz	

Treatment of Appendiceal Perforation	57
Alex M. Almoudaris and Omar Faiz	

Part III Imaging of Acute Appendicitis in Adults

Imaging of Acute Appendicitis in Adults: Radiography.	69
Ronald L. Eisenberg	

Imaging of Acute Appendicitis in Adults: Ultrasonography.	77
R. Brooke Jeffrey	

Imaging of Acute Appendicitis in Adults: Computed Tomography	97
Caroline Keyzer and Pierre Alain Gevenois	
Ultrasonography Versus Computed Tomography: Evidence-Based Imaging	111
Caroline Keyzer and Pierre Alain Gevenois	
Imaging of Acute Appendicitis in Adults: MRI.	117
Christine Schmid-Tannwald and Aytekin Oto	
Imaging of Acute Appendicitis in Adults: Current Practices in Pregnant Women	131
Tracy A. Jaffe	
 Part IV Imaging of Acute Appendicitis in Children	
Imaging of Acute Appendicitis in Children: Radiography	143
Daniel N. Vinocur and Edward Y. Lee	
Imaging of Acute Appendicitis in Children: Ultrasonography	151
Herma C. Holscher	
Imaging of Acute Appendicitis in Children: Computed Tomography Including Radiation Issues.	165
Andrew J. Spencer, Megan R. Saettele, and Lisa H. Lowe	
US Versus CT: Evidence-Based Medicine and Cost-Effectiveness in Imaging Acute Appendicitis in Children.	177
Shyama Kamat, Barbara M. Garcia Peña, Craig Blackmore, and L. Santiago Medina	
Imaging of Acute Appendicitis in Children: MRI	183
Marcus Hörmann	
 Part V Imaging Findings of Other Appendiceal Diseases, Impact of Imaging on Negative Appendectomy Rate, and Radiation Dose Optimization	
Spontaneously Resolving and Chronic Appendicitis	191
Lodewijk P. J. Cobben and Julien B. C. M. Puijlaert	
Imaging of Primary Appendiceal Neoplasms	199
Theodora A. Potretzke and Perry J. Pickhardt	
Impact of Imaging on Negative Appendectomy Rate.	221
Courtney A. Coursey and Ricardo D. Moreno	

Radiation Dose from MDCT Examinations for Suspected Acute Appendicitis	233
Denis Tack and Caroline Keyzer	
 Part VI Concluding Remarks	
Summary and Perspectives	251
Caroline Keyzer and Pierre Alain Gevenois	
Index	253