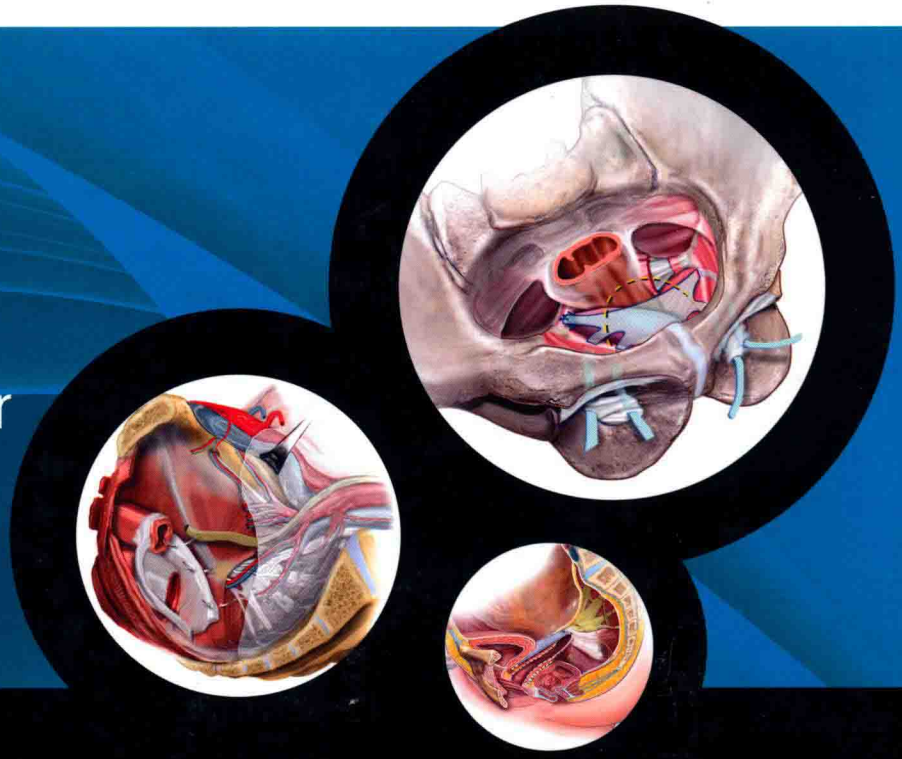
FEMALE PELVIC SURGERY VIDEO ATLAS SERIES

MICKEY KARRAM, SERIES EDITOR

Surgical Management of Pelvic Organ Prolapse

Mickey Karram
Christopher F. Maher



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To the women in my life; my wife, Mona, for her unyielding support, love, and dedication to our family unit; and to my three daughters, Tamara, Lena, and Summer, for the joy they give me on a daily basis.

—Mickey Karram

To my parents, Christopher and Clare Maher, for instilling in me from a young age the importance of perseverance and dedication in attaining goals.
To my lovely wife, Dympna, for her enduring love and support and for allowing me the freedom to strive for these goals.
To my children, Hannah, Malachy, Declan, and Clare, for the great joy of being their father and for teaching me the importance of always re-evaluating goals.
Finally, to all my fellows and students, for continually reactivating and refreshing my desire to strive for excellence in the management of female pelvic floor dysfunction.

—Christopher F. Maher

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Preface

Vaginal reconstructive surgery is concerned with the return of abnormal organ relationships to a usual or normal state. There is no one site or degree of damage that must be repaired or restored; there are many and they occur in various combinations at various times of life from different etiologic factors, in varying degrees and with varying degrees of symptoms and disability."

Nichols and Randall, 1989

This statement, made over 20 years ago, eloquently relays the complexities involved in surgically managing patients with pelvic organ prolapse. One in 10 women in the United States will undergo a prolapse repair in their lifetime, and up to 50% of parous women develop prolapse with symptoms. With the aging female being the largest growing segment of the population, these numbers will only increase over time.

At present, there are significant differences in opinion among pelvic surgeons on how best to surgically correct symptomatic pelvic organ prolapse. While the ultimate goal of any reconstructive pelvic surgery is to restore anatomy, restore or maintain bladder and bowel function, and restore or maintain sexual function (if desired), obtaining and eventually objectifying these outcomes have proven to be extremely challenging endeavors.

This book is part of the eight-book series, "Female Pelvic Surgery Video Atlas Series." This text, in line with the others in the series, is designed to be a how-to guide for the various procedures and techniques used to correct pelvic organ prolapse. Although all procedures cannot be described in great detail, the authors have chosen the procedures that have worked well in their hands as well as procedures that have been shown to be successful in the literature. The text is accompanied by numerous original illustrations by renowned medical illustrator Joe Chovan as well as more than 70 videos demonstrating the various techniques discussed and illustrated in the text.

We have tried to create a text that is comprehensive and objective yet clinically oriented by presenting the various techniques in a clinical case format that highlights the technical aspects of the procedure as well as preoperative preparation and postoperative management.We have tried to address controversial topics, such as route of surgery and mesh augmentation, in an objective, unbiased fashion.

The book begins with a review of epidemiology, risk factors, and social impact of pelvic organ prolapse. Chapter 2 discusses surgical anatomy of pelvic organ support. This chapter is accompanied by numerous video clips of cadaveric dissections as well as live surgical demonstrations to facilitate a three-dimensional anatomic understanding of the anatomy of pelvic support. Chapter 3 reviews the methods to use in the preoperative assessment of patients with

pelvic organ prolapse as well as commonly utilized staging techniques for documenting the severity of prolapse. Chapter 4 discusses and demonstrates techniques for simple and difficult vaginal hysterectomy and trachelectomy. Chapter 5 reviews hysteropexy with a detailed discussion and demonstration of laparoscopic and vaginal techniques. Chapter 6 discusses the use of robotic-assisted laparoscopic colposacropexy and cervicosacropexy. Chapters 7 through 9 review the surgical management of anterior, apical, and posterior vaginal wall prolapse. These chapters include detailed discussions on laparoscopic and abdominal approaches to mesh augmentation, vaginal approaches to mesh augmentation, and native tissue vaginal suture repairs. Chapter 10 reviews obliterative procedures with detailed discussions on the LeFort partial colpocleisis and complete colpectomy and colpocleisis. Chapter 11 presents a series of 15 cases related to various complications that can occur with prolapse procedures. All the cases are accompanied by a surgical video clip to illustrate fully how best to avoid and manage the specific complication.

We hope this text and unique method of presenting information will be well received by reconstructive surgeons, whether they are residents or fellows or are more seasoned gynecologic or urogynecologic surgeons. The ultimate hope is to improve the skill level of all surgeons managing these common disorders.

Mickey Karram
Christopher F. Maher

Contents

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Epidemiology, Risk Factors, and Social Impact of Pelvic Organ Prolapse

Corina Schmid MD and Christopher F. Maher MD

Introduction

Pelvic organ prolapse (POP) is a common problem affecting up to 50% of parous women; 6.3% of women will undergo a surgical correction for POP by 80 years of age. Prolapse surgery is an increasingly important part of gynecologic practice as a result of an aging population and the decreasing rate of hysterectomies. Prolapse surgery is already performed twice as frequently as continence surgery, and the surgical and admission times are at least three times greater than continence surgery. Considering the increasing time and resources devoted to POP, surprisingly little is known regarding the incidence, prevalence, risk factors, and progression rates of this condition.

POP is defined by the International Continence Society (ICS) as the descent of one or more of the following structures: the anterior or posterior vaginal wall, the apex of the vagina, or the vault. Loss of the vaginal support is observed in 43% to 76% of patients during routine gynecologic care and in up to 3% to 6% with a descent beyond the hymen. (Swift et al, 2005; Samuelsson et al, 1999)

Prevalence and Incidence of Pelvic Organ Prolapse

Epidemiologic studies of the natural history, incidence, and prevalence of POP are currently lacking. It is widely accepted that 50% of women will develop prolapse, but only 10% to 20% of those will seek evaluation for their condition. (Phillips et al, 2006) In the current literature, the overall prevalence of POP shows significant variation, depending on the definition used, ranging from 3% to 50% (Table 1-1). When POP is defined and graded on symptoms, the prevalence is 3% to 6%, as compared with 41% to 50% when based on examination, indicating that the majority of women with prolapse are asymptomatic. (Phillips et al, 2006; Samuelsson et al, 1999; Nygaard et al, 2008; Swift, Tate, Nicholas, 2003) On examination, anterior compartment prolapse is the most frequently reported site of prolapse, is detected twice as often as posterior compartment defects, and three times more often than apical prolapse. (Hendrix et al, 2002; Handa et al, 2004) After hysterectomy, 6% to 12% of women will develop vault prolapse (Marchionni et al, 1999; Aigmueller et al, 2010), and in two thirds of these cases, multiple compartment prolapse is present. (Morley, DeLancey, 1988)

Little knowledge of the natural history of POP is available. The reported incidence for cystocele is approximately 9 per 100 women-years, 6 per 100 women-years for rectocele, and 1.5 per 100 women-years for uterine prolapse. (Handa et al, 2004) Bradley et al, report the 1-year incidence of POP at 26% and the 3-year incidence at 40% with regression rates of 21% and 19%, respectively. In general, older parous women are more likely to develop new or progressive POP than to show regression. Of the women over 65 years of age, 10% have had prolapse progression of more than 2 cm, whereas only 2.7% of women younger than 65 years had a regression by the same amount. (Bradley et al, 2007)