

available at www.sciencedirect.com
journal homepage: www.europeanurology.com



European Association of Urology



Collaborative Review – Bladder Cancer

Enhanced Recovery after Urological Surgery: A Contemporary Systematic Review of Outcomes, Key Elements, and Research Needs

Raed A. Azhar^{a,b,*}, Bernard Bochner^c, James Catto^d, Alvin C. Goh^e, John Kelly^f, Hiten D. Patel^g, Raj S. Pruthi^h, George N. Thalmannⁱ, Mihir Desai^b

^a Urology Department, King Abdulaziz University, Jeddah, Saudi Arabia; ^b USC Institute of Urology, Keck School of Medicine, University of Southern California, Los Angeles, CA, USA; ^c Urology Service, Department of Surgery, Memorial Sloan Kettering Cancer Center, New York City, NY, USA; ^d Academic Units of Urology and Molecular Oncology, University of Sheffield, Sheffield, South Yorkshire, UK; ^e Department of Urology, Houston Methodist Hospital, Houston, TX, USA; ^f Division of Surgery and Interventional Science, UCL Medical School, University College London, London, UK; ^g James Buchanan Brady Urological Institute, Johns Hopkins Medical Institutions, Baltimore, MD, USA; ^h Division of Urologic Surgery, The University of North Carolina at Chapel Hill, Chapel Hill, NC, USA; ⁱ Department of Urology, University Hospital Inselspital, Bern, Switzerland

Article info

Article history:

Accepted February 17, 2016

Associate Editor:

James Catto

Keywords:

Enhanced recovery after surgery
ERAS
Perioperative care

Abstract

Context: Enhanced Recovery after Surgery (ERAS) programs are multimodal care pathways that aim to decrease intra-operative blood loss, decrease postoperative complications, and reduce recovery times.

Objective: To overview the use and key elements of ERAS pathways, and define needs for future clinical trials.

Evidence acquisition: A comprehensive systematic MEDLINE search was performed for English language reports published before May 2015 using the terms “postoperative period,” “postoperative care,” “enhanced recovery after surgery,” “enhanced recovery,” “accelerated recovery,” “fast track recovery,” “recovery program,” “recovery pathway,” “ERAS,” and “urology” or “cystectomy” or “urologic surgery.”

Evidence synthesis: We identified 18 eligible articles. Patient counseling, physical conditioning, avoiding excessive alcohol and smoking, and good nutrition appeared to protect against postoperative complications. Fasting from solid food for only 6 h and perioperative liquid–carbohydrate loading up to 2 h prior to surgery appeared to be safe and reduced recovery times. Restricted, balanced, and goal-directed fluid replacement is effective when individualized, depending on patient morbidity and surgical procedure. Decreased intraoperative blood loss may be achieved by several measures. Deep vein thrombosis prophylaxis, antibiotic prophylaxis, and thermoregulation were found to help reduce postsurgical complications, as was a multimodal approach to postoperative nausea, vomiting, and analgesia. Chewing gum, prokinetic agents, oral laxatives, and an early resumption to normal diet appear to aid faster return to normal bowel function. Further studies should compare anesthetic protocols, refine analgesia, and evaluate the importance of robot-assisted surgery and the need/timing for drains and catheters.

Conclusions: ERAS regimens are multidisciplinary, multimodal pathways that optimize postoperative recovery.

Patient summary: This review provides an overview of the use and key elements of Enhanced Recovery after Surgery programs, which are multimodal, multidisciplinary care pathways that aim to optimize postoperative recovery. Additional conclusions include identifying effective procedures within Enhanced Recovery after Surgery programs and defining needs for future clinical trials.

© 2016 European Association of Urology. Published by Elsevier B.V. All rights reserved.

* Corresponding author. Urology Department, King Abdulaziz University, P.O. BOX 80215, Jeddah 21589, Saudi Arabia. Tel. +966 12 640 1000; Fax: +966 12 640 8231.
E-mail address: raazhar@kau.edu.sa (R.A. Azhar).

<http://dx.doi.org/10.1016/j.eururo.2016.02.051>

0302-2838/© 2016 European Association of Urology. Published by Elsevier B.V. All rights reserved.

Please cite this article in press as: Azhar RA, et al. Enhanced Recovery after Urological Surgery: A Contemporary Systematic Review of Outcomes, Key Elements, and Research Needs. Eur Urol (2016), <http://dx.doi.org/10.1016/j.eururo.2016.02.051>

1. Introduction

Enhanced recovery after surgery (ERAS) programs are multidisciplinary, multi-element care pathways that aim to standardize and improve perioperative management [1]. The goal of ERAS is to enable a faster and more efficient recovery using evidence-based practices [1]. Studies have shown that ERAS adoption decreases postoperative complications by 50%, reduces length of stay (LOS) by 30%, and decreases readmission rates, thereby lowering health costs [2]. Cultural and bureaucratic barriers have hindered the adoption of ERAS programs in many specialties, including urology. Here, we provide a comprehensive overview of evidence-based interventions utilized in ERAS programs. Our aims are to determine the effectiveness of specific procedures and to provide a basis for future clinical trials.

2. Evidence acquisition

2.1. Search strategy and study selection

We performed a systematic literature review in accordance with the Preferred Reporting Items for Systematic Reviews and Meta-Analyses statement (Fig. 1). We used MEDLINE to identify English language articles, reviews, and editorials published prior to May 2015. The search terms and selection strategy details are provided in Figure 1. We scrutinized reference lists of recovered articles, relevant scientific meeting abstracts, and online guideline websites for

additional articles. Original articles, publications within the past 5 yr, and those with the highest level of evidence were preferred. The quality of evidence from the included studies focusing on urological procedures, namely radical cystectomy (RC), was comprehensively assessed using the US Agency for Healthcare Research and Quality method (Table 1).

3. Evidence synthesis

The electronic search yielded 956 potential urological articles, of which 50 were assessed for eligibility (Fig. 1). Until recently, the published ERAS literature has focused primarily on colorectal surgery outcomes. The adoption of ERAS pathways across different surgical disciplines has spread informally, although there have been some notable coordinated initiatives. For example, the UK National Health Service's Enhanced Recovery Partnership Program acted as a catalyst for adoption among surgical specialties. Recently, ERAS guidelines have been developed and published for several surgical procedures [1,3,4]. Guidelines vary by specialty but include at least 20 elements categorized into preoperative, intraoperative, and postoperative components [3].

3.1. Preoperative ERAS elements

3.1.1. Preadmission information and expectation counseling

Written, verbal, or electronic counseling about ERAS prior to surgery is important for successful implementation and

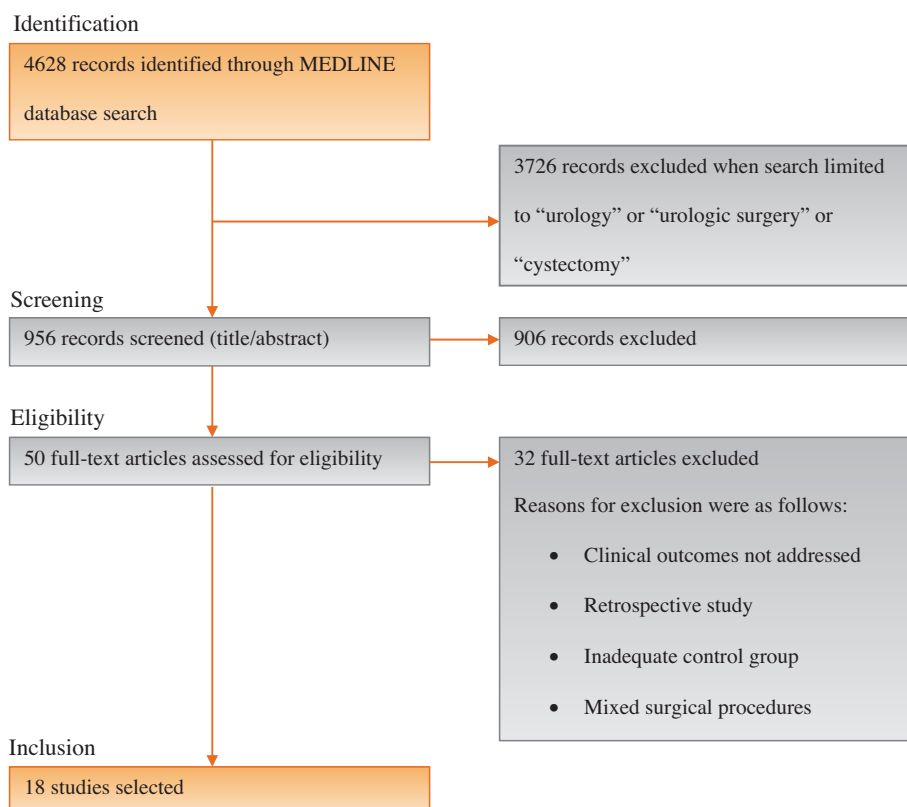


Fig. 1 – Selection process according to the Preferred Reporting Items for Systematic Reviews and Meta-Analyses statement.

Download English Version:

<https://daneshyari.com/en/article/6177403>

Download Persian Version:

<https://daneshyari.com/article/6177403>

[Daneshyari.com](https://daneshyari.com)