

HOSPITAL PHYSICIAN®

EMERGENCY MEDICINE BOARD REVIEW MANUAL

STATEMENT OF EDITORIAL PURPOSE

The *Hospital Physician Emergency Medicine Board Review Manual* is a peer-reviewed study guide for residents and practicing physicians preparing for board examinations in emergency medicine. Each quarterly manual reviews a topic essential to the current practice of emergency medicine.

PUBLISHING STAFF

PRESIDENT, GROUP PUBLISHER

Bruce M. White

EDITORIAL DIRECTOR

Debra Dreger

EDITOR

Robert Litchkofski

ASSISTANT EDITOR

Rita E. Gould

EDITORIAL ASSISTANT

Farrowh Charles

EXECUTIVE VICE PRESIDENT

Barbara T. White

EXECUTIVE DIRECTOR

OF OPERATIONS

Jean M. Gaul

PRODUCTION DIRECTOR

Suzanne S. Banish

PRODUCTION ASSISTANT

Kathryn K. Johnson

ADVERTISING/PROJECT MANAGER

Patricia Payne Castle

SALES & MARKETING MANAGER

Deborah D. Chavis

NOTE FROM THE PUBLISHER:

This publication has been developed without involvement of or review by the American Board of Emergency Medicine.



Endorsed by the
Association for Hospital
Medical Education

Procedural Sedation and Analgesia

Series Editor: Susan B. Promes, MD, FACEP

Residency Program Director

Division of Emergency Medicine

Duke University Medical Center

Associate Clinical Professor

Department of Surgery

Duke University Medical School

Durham, NC

Contributor: John S. Rose, MD

Associate Program Director

Assistant Professor of Medicine

Division of Emergency Medicine

University of California, Davis School of Medicine

Davis, CA

Table of Contents

| | |
|----------------------------------------|----|
| Introduction | 2 |
| Nomenclature | 2 |
| Indications | 2 |
| Patient Assessment | 3 |
| Monitoring and Documentation | 3 |
| PSA Agents | 4 |
| Postprocedure | 10 |
| Conclusion | 10 |
| References | 11 |

Cover Illustration by Christie Grams

Copyright 2005, Turner White Communications, Inc., Stafford Avenue, Suite 220, Wayne, PA 19087-3391, www.turner-white.com. All rights reserved. No part of this publication may be reproduced, stored in a retrieval system, or transmitted in any form or by any means, mechanical, electronic, photocopying, recording, or otherwise, without the prior written permission of Turner White Communications. The preparation and distribution of this publication are supported by sponsorship subject to written agreements that stipulate and ensure the editorial independence of Turner White Communications. Turner White Communications retains full control over the design and production of all published materials, including selection of appropriate topics and preparation of editorial content. The authors are solely responsible for substantive content. Statements expressed reflect the views of the authors and not necessarily the opinions or policies of Turner White Communications. Turner White Communications accepts no responsibility for statements made by authors and will not be liable for any errors of omission or inaccuracies. Information contained within this publication should not be used as a substitute for clinical judgment.

Procedural Sedation and Analgesia

John S. Rose, MD

INTRODUCTION

Safe and effective sedation practices are significant contributions to the management of painful and unpleasant procedures in the emergency department (ED). Numerous publications in both the pediatric and adult emergency medicine literature have highlighted the increasing role and popularity of procedural sedation,¹⁻⁴ and investigators have evaluated the efficacy of various agents in the ED setting.⁵⁻¹⁰ In 1998, the American College of Emergency Physicians published a clinical policy for procedural sedation and analgesia that reviewed the literature for systemic sedation practices.¹¹ The Canadian College of Emergency Physicians published similar guidelines for sedation practice in 1999.¹² This review discusses the use of procedural sedation in the ED, including indications, patient assessment and monitoring, documentation, agents, and postprocedure issues.

NOMENCLATURE

Nomenclature in sedation practice has evolved over the past several years. Terms such as “conscious” and “deep sedation” are being replaced by the more general term “procedural sedation and analgesia.”² Procedural sedation and analgesia (PSA) refers to a technique of administering sedatives or dissociative agents with or without analgesics to induce a state that allows the patient to tolerate an unpleasant procedure while maintaining cardiorespiratory function. PSA is intended to result in a depressed level of consciousness in which the patient is able to maintain airway control independently and continuously during a procedure with little or no pain. Specifically, the drugs, doses, and techniques used are not likely to produce loss of protective airway reflexes.² Throughout this review, the acronym “PSA” will be used in place of the terms “conscious,” “deep,” or “dissociative” sedation.

INDICATIONS

PSA has a wide role in patient care, especially in pediatric emergency care. Determining whether a given clinical situation warrants the use of PSA is a fundamental skill of emergency medicine physicians. Analgesia clearly is warranted for a painful procedure is obvious, but with an increasingly wider selection of available agents, use of PSA is becoming more common in procedures not previously associated with PSA (eg, pediatric laceration repair). Defining the proper indication for PSA involves several factors: the clinician’s experience, the capabilities of the ED where the procedure will take place, hospital and ED protocols, and patient preparation. With reports of significant oligoanalgesia in the management of ED patients,¹³ physicians should consider using PSA liberally in the most painful or unpleasant ED experiences. Some of the most reported clinical indications for PSA in the ED setting include orthopedic injuries and reductions, wound débridement, burn care, abscess drainage, tube insertion, pediatric sexual assault examinations, and diagnostic imaging studies.¹⁴ This list is not all inclusive but rather illustrates the varied indications for PSA in the ED.

In determining whether PSA is indicated, the physician must evaluate the risks and benefits of sedation. For example, using heavy sedation when treating a simple extremity laceration in a child probably is not warranted as the risks outweigh the benefits. However, a complicated pediatric facial laceration may be treated most effectively when PSA is administered. Although use of PSA appears to be more time consuming, it ultimately may result in greater patient and clinician satisfaction. Physicians must remember that inflicting pain on patients is neither difficult nor respected. The art and skill of PSA in emergency medicine is to have a patient not object to or remember an unpleasant experience. Another caveat to bear in mind is that PSA is for *brief* painful and unpleasant procedures. Any procedure requiring prolonged sedation or analgesia is probably