FALLIS

PEDIATRIC EMERGENCIES

Surgical Management

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Foreword

During the past 15 years tremendous strides have been made in the management of surgical emergencies. Much of this has come about because of vastly improved diagnostic techniques, especially in the field of radiology, but an even greater component is due to the training of physicians, especially primary care physicians, in emergency medicine and surgery. Most community hospitals are now staffed by such physicians, who do periodic shifts in the emergency department, and it is to these that Dr. Fallis' book is primarily addressed.

The book reflects Dr. Fallis' dedication to children and the experience he has gained through years of dealing with them and their parents as Chief of the Division of Paediatric Surgery in a large community general hospital and Director of Emergency Services at The Hospital for Sick Children, Toronto. His introduction should be "*must*" reading not only for physicians dealing with children in an emergency department, but also for all physicians dealing with children anywhere.

The tempo of illness in children is what sets them apart from their adult counterparts. They become ill quickly, and they may die quickly, but they have tremendous recuperative powers, and with proper diagnosis and treatment they recover quickly.

Dr. Fallis stresses the importance of history taking and a thorough physical examination. Although time-consuming, it is time well spent, and most diagnoses are made on this basis, with tests being mainly confirmatory. It is a time to establish rapport, to gain the respect and trust of both the child and parents, and will save countless hours in the long run. There is nothing more rewarding than the mutual trust and respect engendered by a good physician-patient-parent relationship, and as Dr. Fallis states "this is best obtained and maintained with kindness and a sense of humor."

Dr. Fallis stresses the importance of "inspection" (don't do something—stand there, and observe the child), learning to recognize a "sick" infant or child, and leaving uncomfortable hands-on maneuvers, such as palpation, until the end. In fact, abdominal examination and checking for tender areas or a stiff neck can often be carried out quite unobtrusively while talking to the parents and child.

The text is simply and beautifully presented, and it is difficult to single out particular areas of excellence and importance. The chapter

on "Lacerations and Suturing," explaining how to do the job painlessly and how to deal with a moving target, is especially relevant to all emergency departments. The chapters on "Acute Abdominal Pain" and "Recurrent Abdominal Pain" deal thoroughly with perhaps the most common and potentially serious presenting complaint of children. The chapter on "Gynecologic Emergencies" by Jennifer Blake, M.D., is a very welcome addition to an often neglected area.

The book is liberally laced with pearls of wisdom gleaned from Dr. Fallis' broad experience—pearls such as "shock in a patient with a head injury," or relatively simple lacerations and trauma, often means an associated problem such as a ruptured spleen.

Although written particularly for the family practitioner working in the emergency departments of community hospitals, or the emergency physician in a mainly adult hospital where an occasional child appears, I would strongly recommend this book for pediatricians and for residents and interns dealing with children.

HARRY BAIN, M.D.
Professor Emeritus of Paediatrics
University of Toronto
former Physician-in-Chief
The Hospital for Sick Children, Toronto

Preface

It is my hope that this volume will assist in the management of infants and children with surgical conditions, both major and minor, seen in emergency departments or physicians' offices anywhere. If a result is that one child has less pain, fewer threatening tests, a quicker and more decisive diagnosis, it will all have been worthwhile. If this outcome is achieved many times for many children, it will have been worthwhile many times over.

In arranging the material, I have attempted to include information not readily available elsewhere. Indeed, I hope that what has evolved at least in part is a collection of "pearls" learned from a great many others as well as from the experience of 15 years in pediatric general surgical practice and 15 years with duties, both clinical and administrative, in a busy pediatric emergency department. This volume is far from encyclopedic. The obvious gaps in areas where there is no particular difference in the management of the child from that required by the adult are intentional. This is not a comprehensive text and should be used as an adjunct only.

As a pediatric general surgeon, I could be considered overly presumptuous for trespassing in foreign territory when I discuss topics normally taught by orthopaedic, plastic, ophthalmic, or neurologic surgeons or dentists. To the contrary! I feel the lack of a vast knowledge in any one of these areas is to a degree what permits me the effrontery of discussing them. The teaching of a subspecialist naturally reflects his or her subspecialization and generally presumes much in the way of background information. My lack of an extensive background knowledge in each of the specialties removes the risk of presuming it in my readers.

Indeed, I have the best of all worlds in that I have the privilege of writing on topics for which others stand as the acknowledged experts, while at the same time having the interest and total cooperation of those selfsame experts who have very generously reviewed the manuscript and provided their "oh so tactful" comments. I cannot describe how supportive and reassuring they have been, and I extend sincere appreciation to those who have given their time and effort in this way. They are listed under Acknowledgments.

I have long had association not only with primary contact physicians, but also with first-year family practice, emergency medicine, and pediatric residents, interns fresh from medical school, and student clerks. I hope this exposure has taught me how to present the material in a way which should be both readable and usable for those seeing children in the office or emergency department.

Some practitioners just naturally get along with children and need no advice on how to approach them. Others have absolutely no rapport with young patients, will never acquire it, and should spend their days dealing with dead tissue, test tubes, or adults. On the other hand, one frequently meets the individual who has not previously had the opportunity to deal with children, either in youth organizations or family, and needs a few pointers before trying to assess for the first time a totally uncooperative 4-year-old whose anxiety is matched only by his mother's. In the Introduction, I have tried to present some of the techniques which have worked for me in these difficult situations, although the reader will doubtless develop his or her own methods as time passes. While doing so, it must be remembered that "the young child is not just a little adult" (this is a cliché which all writings on dealing with children seem to incorporate). When confronted with a "difficult" child, the first thing to do before approaching too closely is to stop and think about how to obtain and maintain rapport.

The Introduction also contains information on some of the other general aspects of pediatric primary surgical care, although much of it is not unique to surgery, and concludes with a brief description of the principle which I have used for some time in trying to teach students and house staff how to avoid missing serious disease.

As in most emergency publications, the emphasis in this book is on diagnosis and initial care. For those not being admitted, I have tried to cover treatment from start to finish. For those with more serious conditions requiring admission, I have kept the discussion of treatment, for the most part, to the first hour or two in the department, although with a few conditions I have alluded to long-term care and prognosis.

Generally I have chosen to omit those conditions rarely if ever seen in the emergency department. Those conditions not generally considered to have surgical implications are discussed only insofar as differential diagnosis requires it.

The main focus of this book is the primary contact physician confronted by the ill or injured child who is as yet undiagnosed, not the consultant physician or surgeon who will bring to the patient the special knowledge which for the most part is omitted from these pages. Accordingly situations or conditions are described in which "referral" or "consultation" is given as the recommended management but in which many emergency physicians might be perfectly capable of continuing further. Indeed, there are countless hospitals in which the full spectrum of specialists is not immediately available and in which the emergency department staff must make decisions and initiate treatment measures considered in other institutions to be within the domain of the consultant. I ask that these competent emergency

experts not take affront because in some areas I have elected not to go into the depth they might have preferred. I have tried to keep the material comprehensive rather than intensive in order to produce a final product of practical and useful size.

Acknowledgments

I owe sincere appreciation to my colleagues in the Division of Emergency Paediatrics at The Hospital for Sick Children for their encouragement and advice and to Dr. David Jaffé who succeeded me as the director of the division and of the Emergency Services. His support has been very important in the completion of this project.

Although the manuscript was recorded directly on a word processor, the many earlier editions and revisions of the booklet from which it evolved were typed and retyped countless times by my secretary, Mrs. Anna Capizzanno. Her efforts to maintain accuracy and a continuing high quality have been crucial in the ultimate product and are greatly appreciated. The line drawings were capably produced by Ms. Sari O'Sullivan.

Chapter 32, Gynecologic Emergencies, was written by Dr. Jennifer Blake, Gynecologist-in-Chief, The Hospital for Sick Children.

Consultants who have reviewed portions of the manuscript include Dr. John Wedge (Orthopaedics), Dr. Ronald Zuker (Plastic Surgery), Dr. Harold Hoffman (Neurosurgery), Dr. Raymond Buncic (Ophthalmology), Dr. David Wesson (Trauma Service), Dr. William Holland (Radiology), and Dr. Douglas Johnston (Dentistry).

JAMES C. FALLIS, M.D., FRCS(C)

The orientation talk given to every affiliating intern arriving in the department by Dr. Stuart A. Thomson during the 8 years he served as Surgical Supervisor was the stimulus for the production of this book in its initial form. After many revisions its purpose is still to perpetuate, in some small way, the teaching he provided.

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CHAPTER

1

Introduction

Assessment

The child in the emergency department because of a surgical condition may be totally cooperative and may pose no particular difficulty when the physician attempts to obtain a history and carry out an examination. On the other hand, the patient may be frightened or in pain or perhaps just spoiled, belligerent, and ill-behaved. In any of these instances, assessment can be very difficult, and all your patience and resourcefulness may be required. Remember two important things—*smile* and *go slowly*.

Although firm discipline is occasionally needed to handle a child, this is the exception. Generally rapport is best obtained and maintained with kindness and a sense of humor. Even though a child irritates beyond measure, *smile*. Let no evidence of irritation show. Do nothing that has an aura of ominousness or foreboding. Intimidation prevents communication.

Avoid startling or frightening a child with too quick an approach or sudden movements. Move slowly. Do not palpate until you have obtained a complete history, watching the child all the while. Inspect thoroughly before palpating. When touching, try to distract the child. If you can direct attention to something other than your examining hand, a reaction that seems to be in response to pain is more likely to be spontaneous and honest. Do not cause pain until it is necessary because doing so may remove all possibility of obtaining any further useful information. Do not tell a frightened child to move his or her arm: hand the child something and watch. Do not order a difficult patient to walk across the room: ask his or her mother to move away and watch the child get to her.

When you sense that a child is going to be difficult to examine, stop and ask yourself how you will best be able to obtain the needed information. Try to dream up the trick or subterfuge that reveals what

you need to know without the child realizing he or she is being examined.

Assess to the best of your ability and recognize that the assessment may take much longer than it would were the patient a cooperative adult. Inadequate examination is caused more often by unwillingness to spend the needed time and effort than by lack of knowledge or experience.

Try to reach a working diagnosis before requesting any special investigation. The presence of a presumptive diagnosis on the radiograph or laboratory requisition implies that the child has been assessed carefully and completely.

Investigation

Laboratory tests and radiographs are important but are never justified unless they are likely to contribute to diagnosis or management.

A radiograph requisition is a request for a radiologic consultation. The medical information on it should include a brief history, relevant findings, and the physician's best attempt at a provisional or working diagnosis. The site of trauma should be recorded because this is not only essential to the radiographer who takes the x-ray films, but also to the radiologist who interprets them. Do not hesitate to discuss the case with the radiographer, who may have valuable suggestions about special views or the usefulness of the ones you have requested.

The degree of detail warranted for investigation in an emergency department is different from that appropriate for inpatients. For practical purposes, tests in the emergency department should relate only to the complaint with which the patient presented to the department and not to other conditions, pre-existing or unrelated, unless one suspects the presence of a serious or life-threatening illness. Strictly speaking, no more investigation should be done than is necessary in the decision to admit, to substantiate, or to rule out an emergency diagnosis or to facilitate emergency care. However, if unrelated symptoms suggest the presence of an additional condition that requires elective assessment, the emergency physician is obligated to communicate this to the patient's regular physician.

Subsequent venipuncture tests beyond those needed in the emergency department are sometimes ordered on a sample of blood from a child who is being admitted in the hope of avoiding the second venipuncture after the child reaches the ward. This is justified only if one can be sure that the tests actually are not repeated on the ward. More extensive investigation is also sometimes warranted when a child who does not require admission has come from far away and would otherwise need a second elective visit to complete a needed work-up. These considerations are all relative, however, and take low priority when the department is busy.

In spite of the frequency of situations that have legal implications, physicians must guard against requesting expensive investigation solely for legal indications. In such instances the quality of patient assessment and the careful recording of it is of far greater importance.

Treatment

For patients who require admission to the hospital it is important to make the appropriate referrals to the inpatient service as soon as possible. Initial investigation and treatment measures must be started at once. However, when a different medical team will be caring for the child on the ward, it is desirable for those physicians to be involved as soon as the transition can be made easily and smoothly.

Of those children who do not require admission, some need no specific treatment beyond reassurance. If this is the case, that should be the extent of the treatment. Do not treat just for the sake of doing something. If antibiotics are not indicated, do not order them just because a parent requests them. On the other hand, a patient's regular physician may have led the parent to expect admission, a certain procedure, or a specific medication, none of which may be felt by the emergency staff to be indicated. When this is the case, careful reassurance and complete explanation are required and must be done without criticism of the patient's regular physician. Ideally you should discuss your decision with the outside physician before instituting treatment, although practical issues frequently prevent this. At any rate, you should proceed with the proper treatment after explaining your decision to the parent.

If treatment once started in the emergency department needs to be carried on outside, be sure that all the necessary arrangements for this are completed.

Communication

When a child goes home from the emergency department, it is important that parents be told clearly what to expect and particularly what danger signs to watch for. On leaving parents should know what to do, whom to call, and where to go if the child's condition worsens or fails to improve as anticipated. This advice is very important—almost as important as the accuracy of diagnosis and appropriateness of treatment. It provides parents with something to fall back on before they see or can contact their own physician. The discharge advice and the telephone number of the emergency department, often printed on a tear-out sheet for parents, provides security, both medical and legal, that can be obtained by no other means. It is important to record on the chart exactly what the parents were told.

Be sure all follow-up arrangements, with family physicians, regular pediatrician, or clinic, are completed. Record on the chart what these arrangements are.

If you think you are not communicating satisfactorily with the parents, ask someone else to try. If language is a barrier, request an interpreter. Be sure that the interpreter explains all instructions carefully and tells the parents where to telephone or what to do if progress is not as expected.