Practical Pediatric and Adolescent Gynecology
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Edited by

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Preface

I’m assuming that you’re a “clinician” – a term that I use to mean someone who provides clinical care for individuals – and in the case that you’re reading this book, for young girls and adolescent young women. You may be a family physician, a family nurse practitioner, a general gynecologist, a pediatrician, an obstetrician-gynecologist, an internist, a specialist in adolescent medicine, a physician’s assistant, a registered nurse, a certified nurse midwife, or a clinician of another stripe/persuasion/training. I specifically don’t intend for the audience to be physicians only, as I know that many other varieties of clinicians provide care for girls and teens. I welcome your interest in caring for young girls and adolescents. You may regularly provide care for teens, but want to know more about their gynecologic care, as do many of my colleagues in adolescent medicine. You may provide gynecologic care for adults, but want to learn more about the gynecologic conditions that affect young girls that you see much less frequently, as is the case with my colleagues who are general obstetrician-gynecologists.

I want to remind those who do not regularly provide pediatric care for teens that there are really two parties to keep in mind with the pediatric age group: the designated patient and her parent (usually her mother or other female adult guardian). The challenges of providing the necessary confidential care to our adolescent patients, who live within the context of their family, are many. It’s not an easy line for a clinician to walk, and thus several chapters in this text address issues such as the initial consultation visit with an adolescent, confidentiality, and even legal issues for the care of adolescents.

I would strongly encourage you to review those chapters in the section on Adolescent Health as a place to start reading, if you intend to provide gynecologic care for adolescents. This section addresses common issues for all adolescents, even those who don’t present with a specific gynecologic problem. For example, Chapter 20 on Adolescent sexuality provides important background on adolescent development. Chapter 19 provides essential legal information on the provision of adolescent healthcare. Another section that will be helpful is Appendix 1, Essential Information, which includes a number of tables that will be relevant to an understanding of adolescent health. Tables on adolescent development, normal menstrual parameters, sexual history taking, psychosocial assessment using the HEEADSSS tool, and indications for a pelvic examination provide a wealth of information summarized in easy to reference tables.

Similarly, providing care for a young girl, particularly one with vulvovaginal symptoms, will be facilitated by pre-reading this Essential Information prior to going to the chapter on a specific symptom or condition.

But after you’ve read these initial chapters and reviewed the Essential Information, then in all likelihood, you will be reviewing the book with concerns about a specific patient with a specific gynecologic problem. I would first direct you to the appropriate section of the book by age – prepubertal or adolescent. Within the age groupings, each section is further organized by either the presenting sign or symptom or by the specific gynecologic condition that occurs in that group. For example, if you are looking for what conditions may cause vaginal discharge in a prepubertal girl, you would look in Section 1 for prepubertal conditions, and then in Part 2 under symptoms and signs. You will then find information about the various conditions that can cause discharge. Alternatively, if you have an adolescent patient whom you have diagnosed as having a specific condition, such as a vulvovaginal yeast infection, and you want to read further about the management of this particular condition, you would look in Section 3 for adolescents, and then under Part 4, gynecologic conditions in adolescent girls.

Finally Appendix 2 includes useful web resources for adolescents, for parents, and for clinicians.

Overall, I hope that the organization of the book will make it both a useful text that will provide background information to allow you to better provide care to teens and young girls, as well as a handy reference that will answer specific questions about girls...
with specific gynecologic symptoms, signs, or conditions.

The preparation of this book has been quite a project, involving the hard work and dedication of many medical colleagues. My friends and colleagues who have so generously contributed their knowledge to the content of this book have, collectively, many, many years of clinical experience. They are the true experts on each topic, and they have taught me a great deal. I extend my heartfelt thanks to each of them. In addition, the many individuals at Wiley-Blackwell have contributed their professionalism, feedback, guidance, skills, and expert management from the very beginning of the project with the conception of an idea for a book, through the long gestation period of communications with contributors, editing, and finally the birth of the book through the work of the production staff. They have my gratitude and thanks. Of course I also thank my husband who has seen my free time consumed by this project, yet who has supported me faithfully and lovingly in so many ways. Finally, but perhaps most importantly, I thank my patients and their parents. They continue to teach me daily.

I welcome any thoughts, suggestions, and feedback on this book. We share the goals of providing excellent, knowledgeable medical care that the young girls and developing young women whom we see in our clinical practices deserve. As clinicians, we are privileged to help guide them toward a healthier future.

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SECTION 1

Prepubertal girls
Infants are ideal patients. The first gynecologic exam should occur in the nursery, when the patient is the most co-operative. Obviously, what can be described at that time is the anatomy and patency of the system.

The primary care provider, who will form a relationship with the child and family over time, is the ideal person to perform routine gynecologic assessments, including inspection of the external genitalia in the context of a routine physical exam. Making the genital exam a part of the general physical exam dispels forbidden boundaries and provides an opportunity for education about normal anatomy and hygiene, and discussions of body changes, when appropriate. It is also a time to open discussions about accurately identifying body parts in order to relieve their stigma. Although parents and children should be having age-appropriate discussions about sexuality during the prepubertal years, specialist expertise may be needed on occasion.

The most common presenting complaints of the genital area in the infant and prepubertal child concern anatomy and development, labial agglutination, dermatologic issues, itching and discharge, bleeding, and sexual abuse. In order to evaluate and diagnose the prepubertal child, you need to take a problem-focused history and perform a physical exam while allaying anxiety and fears.

**History**

The history is best taken while the child is comfortably dressed in her own clothes. It is always good to

<table>
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<th>Tips and tricks</th>
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<td>• Make no mistake, a successful visit with a young child requires the provider to dispel some assumptions – a child is not a small adult and the provider is not in total control. The patience, flexibility, and playfulness of the clinician are keys to engaging and examining the prepubertal child, a challenging undertaking that, when successful, is very rewarding.</td>
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<td>• Inspection of the external genitalia should be a routine part of a general physical exam.</td>
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<td>• The history is best taken while the child is comfortably dressed in her own clothes.</td>
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<td>• When it comes to the physical exam, it is imperative to explain to the child what you will be doing in a way that she can understand. It is always good first to do a general exam, including height and weight, as going straight to the genital area, which may not have been examined before, may appear threatening.</td>
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<td>If the provider has a question about sexual abuse, it should be asked before proceeding to the physical exam so as not to create a situation in which the parent/caregiver assumes that the provider saw something to initiate the question.</td>
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most you will just be inspecting the anatomy without inserting any instruments. It is important to state clearly that the exam will be painless.

The physical exam also provides an opportunity to look for any nongenital skin problems, pigmentation, breast development, hernias, or signs of early puberty, which may explain the presenting complaint.

Then, depending on how the child is doing, you can give the child a description of the choice of positions you would like her to take: butterfly, frog, or lying on mom or dad on the table, in or out of stirrups. Children familiar with horse riding may choose the stirrups. Once the child has chosen a position, simple inspection without touching can reveal lichen sclerosis or evidence of a previous or current vulvovaginitis or excoriations, and the clinical question may be answered. Always inspect the anal area for lesions or excoriation.

You should always identify the anatomy carefully, even if the presenting complaint is an obvious skin condition, because the child may have an additional problem, such as imperforate hymen, that has not been previously noted.

In order to examine the genitalia further, it is important to desensitize the child by first touching her legs and then maybe her inner thighs with your gloved hand. Engaging the child to use her own hands to assist you can be very helpful. They sometimes like to put gloves on as well. Sometimes gentle retraction laterally and downward can reveal labial agglutination or provide a better view of the anatomy, including the clitoris, urethra, and hymen. If you cannot define the anatomy of the hymen, retracting the labia gently forward and asking the child to cough can open things up further. When the vagina is visible, sometimes the clinician can see a discharge or can smell anaerobic organisms. The vagina may be estrogenized or there may be clear hygiene issues.

You can sometimes make a game of placing the child in the knee–chest position (on her knees with her shoulders on the table and bottom up in the air). Spreading her legs and gently spreading the labia can allow you to look up into the vagina for evidence of discharge or foreign bodies such as toilet paper. Before doing this, it is important to tell the child that you are not going to put anything into her bottom and to show her the light you will use. Getting the child to “pant like a puppy” or cough also can help to relax the vagina.

Taking a history also provides an opportunity to describe normal and anticipated changes and to answer questions. At the end of the history, it is good to ask if the parent or child has any questions.

**Physical exam**

When it comes to the physical exam, it is imperative to explain to the child what you will be doing in a way that she can understand. It is always good to first perform a general exam, including height and weight, as going straight to the genital area, which may not have been examined before, may appear threatening. Children are comfortable and familiar with their chests and hearts being listened to and their tummies examined. Give the child choices: not whether or not she will get undressed, but what gown to wear and whether she wants to sit on the table or stay in her parent's lap. It is also good to introduce the light and gloves as things you will be using and allow the child to touch and play with them a little. If you will be using a colposcope, allowing the child to look at something through the scope can demystify the experience. Moreover, the pace of the exam is important: if you rush the child, you can forfeit her co-operation.

Reinforce, particularly to the parents, that you will not do anything to change the anatomy and that...
You always need to be particularly sensitive if the child has been sexually abused or had other exams that did not go well. If, for instance, someone has previously tried to do a vaginal culture with a standard swab used for throat cultures, it is almost impossible to convince a child that the tiny Calgiswab you are going to use is different. Getting her to cough (which distracts the child and can also relax the hymen and open the vagina) and not touching the hymenal ring usually provides a very good vaginal (as opposed to vulvar or vaginal vestibule) culture.

It is important to praise the young child constantly for what a good job she is doing. This is an exam for which you should allow extra time if needed. If the child becomes upset, a time out for everyone to regroup can salvage the appointment that day. If things do not go well, it is still important to identify and acknowledge something that the child did well. Sometimes parents become very frustrated and angry because they have taken time off work for the visit and just want to fix what is going on. It is critical that the child not be punished if she has tried her best, even if it does not work. Sometimes it is best to schedule another visit when the child has eaten or is not tired after school.

**Caution**

If, after following these suggestions, the visit is not going well and the problem is not acute, you will save your relationship with the child by suggesting simple common solutions to the problem (e.g. hygiene, topical “butt creams”, changes in clothing and sleep wear, etc.) and scheduling a future visit.

Working with children is not only a challenging but also a humbling experience, especially for those of us who usually like to be in control. A good visit can be very satisfying, but sometimes, in spite of all our best intentions, patience, and planning, we may not accomplish everything that was requested or that we set out to do during a visit. The clinician will inevitably develop their own unique approach and personal tricks for success. Do not be afraid to act a little like an adult child. Children have a radar for honesty and caring. Making the first experience a good one lays the groundwork for future success for everyone.

**Further reading**

Ambiguous genitalia in the neonate and infant

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Disorders of sex development (DSD) are defined according to the 2006 Lawson Wilkins Pediatric Endocrine Society (LWPES) Consensus Guidelines as “congenital conditions in which development of chromosomal, gonadal, or anatomic sex is atypical.” DSD can be further classified into three categories:

- **46, XX DSD**: e.g. congenital adrenal hyperplasia (CAH), in utero exposure to androgens or progestational agents, gonadal dysgenesis, vaginal atresia
- **46, XY DSD**: e.g. androgen insensitivity syndrome, 5-alpha reductase deficiency, disorders of testosterone biosynthesis, gonadal dysgenesis
- **Sex chromosome DSD**: e.g. Turner syndrome, Klinefelter syndrome, sex chromosome mosaicism.

It is important to keep in mind that a majority of virilized 46, XX infants have CAH (the most common is 21-hydroxylase deficiency), while only 50% of 46, XY infants with a DSD receive a definitive diagnosis (Figure 2.1).

Ambiguous genitalia, which are usually immediately apparent at birth, are a significant type of DSD, affecting 1:4500–5000 live births.

The finding of ambiguous genitalia in the newborn is rarely anticipated by the parents and always stressful and distressing. A prepared and well-informed physician can have a positive influence on the life of the family and infant faced with ambiguous genitalia. There are many possible etiologies of ambiguous genitalia, and the diagnostic process is often prolonged and may not yield a clear diagnosis. There are many challenges with short- and long-term care of the newborn. The universal parental question of “is it a boy, or is it a girl?” requires the medical practitioner to have a basic understanding of embryologic and fetal development, and to develop a sensitive approach to diagnosis and management. Paramount to the immediate and long-term management of a neonate with ambiguous genitalia is involvement of a multidisciplinary team.

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**Caution**

- Ambiguous genitalia should be addressed as a medical emergency.
- Although infants with ambiguous genitalia appear medically stable in the first few days of life, if not addressed urgently, they can medically decompensate, causing significant morbidity and mortality.
- Appropriate initial steps include consultation with experts in the field and an evaluation focused on identifying causes of ambiguous genitalia that are associated with glucocorticoid (cortisol) deficiency and salt-losing crisis (occurs in the first 4–15 days of life).
- Many of these infants may require immediate high-dose hydrocortisone while the work-up is being carried out.

See Figure 2.5 and the “Obtaining a consultation” section later.