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Seminar article

The role of urologists in the care of children with cancer

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Abstract

At most institutions, pediatric urologists play a limited role in the care of children with cancer. Pediatric urologists have a unique experience and skill set to contribute to the care of these patients. Interested pediatric urologists should become experts in pediatric urologic oncology and demonstrate this interest by participating in tumor board and relevant academic activities. They should advocate for a collaborative approach with pediatric general surgeons in the surgical management of children with genitourinary as such an approach benefits patient care, contributes to professional development of all parties, and develops relationships that contribute to programmatic development for the institution in oncology and other areas.

Keywords: Pediatric cancer; Surgical oncology; Pediatric urology

At most institutions, pediatric urologists play a limited role in the care of children with cancer. Pediatric urologists are consulted for the rare urologic complications of cancer therapy such as hemorrhagic cystitis and are occasionally the primary surgeons for pediatric genitourinary malignancies. Though pediatric urologists are recognized as the experts for the surgical management of nearly all diseases of the genitourinary tract, at most institutions, they have been relegated to a minor role in the management of the most common pediatric genitourinary tumors. A recent survey by the Pediatric Urologic Oncology Working Group of the Society for Pediatric Urology suggested that at most of the institutions, pediatric urologists participate in the treatment of less than 25% of the renal tumor cases [1]. This has occurred at least in part because of the limited role pediatric urologists play in the pediatric oncology team as a whole mainly owing to the relative rarity of pediatric genitourinary tumors. In contrast, pediatric surgeons are interacting with our oncology colleagues on a regular basis, dealing with a variety of tumors and, perhaps more importantly, placing vascular access lines on a nearly daily basis for these patients. Although placing a plethora of lines does not make one an expert in genitourinary tumors, it does make one a familiar and essential colleague to the pediatric oncologists. If we want to be more than occasional tumor surgeons and reactive consultants for the management of urologic complications of cancer treatment, then we must aggressively advocate for a more important role on the pediatric oncology team.

In addressing this issue, we must first be clear about why it is important that pediatric urologists should be involved in the management of genitourinary tumors. The argument will gain little traction if it is strictly based on our skill at performing the relevant operations. Any skilled surgeon can learn to do any operation if given adequate mentoring and opportunities for experience. Indeed, though limited, studies have shown that outcomes for cancer surgery (nephrectomy specifically) are comparable when performed by pediatric urologists and by pediatric surgeons [2,3]. It is difficult to convince oncologists, and impossible to convince pediatric general surgeons, that we are better at performing the operations (with the possible exception of partial nephrectomy). What we do offer is a unique understanding of the physiology of the genitourinary tract and a wealth of experience arising from managing benign genitourinary disease and, in our adult training, managing urologic tumors specifically. Urologists have been at the forefront, for example, of advocating for the extension of indications for partial nephrectomy for Wilms tumor and for studying

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and surveying for the long-term complications of abnormal bladder function in children with pelvic rhabdomyosarcomas. We are uniquely positioned to consider and study these and many other issues bearing on the management of children with genitourinary tumors. In making our case, we should be clear that there is no role for "turf" claims—that somehow we are entitled by divine right to manage these patients. Moreover, we should not tolerate similar arguments put forward by our general surgical colleagues. Rather, we must make the argument that pediatric urologists have an important perspective to bring to bear on patient care, development of oncology programs, and improving outcomes through innovations in the management of tumors and the sequelae of cancer treatment.

If pediatric urologists are to attain and maintain an important role in the management of genitourinary tumors, under what model should this occur? There are 4 possible models an institution may adopt (intentionally or by default) for the respective roles of the pediatric surgeons and urologists in managing these patients. These 4 possibilities arise from whether these tumors are managed collaboratively or competitively by urologists and general surgeons and whether the interaction is of equals or of unequals. In what appears to be the most common model, these tumors are managed competitively and unequally. They are managed competitively in that individual patients are managed by either a pediatric surgeon or a urologist. They are managed unequally in that most of the patients with tumors are sent to 1 specialist. In most cases, the general surgeons are the primary recipients of these referrals, but at a few institutions, pediatric urologists care for most of the genitourinary tumors. In rare cases, there may be relative parity in the distribution of these cases—a competitive though equal system. Less common is the collaborative approach in which pediatric surgeons and urologists actively participate in the care of all, or nearly all, patients with a genitourinary tumor. This may also be an unequal model in which one specialist is usually the primary surgeon and the other is an active consultant. However, collaboration can also be done under a model in which responsibility is shared more or less equally. I would argue that this last approach is the most beneficial for all involved.

In a collaborative approach of equals, pediatric urologists and general surgeons are both brought onto the team managing the patient at the outset. Some system is in place to determine the "primary" surgeon for any given patient—this can be accomplished equitably by a call schedule or other means. The assignment of a "primary" surgeon is important, as for each patient, there needs to be a surgical "captain" who is ultimately responsible to the team and the patient's family for surgical issues. However, regardless of "primary surgeon" assignment, general surgeons and urologists both give consultation to the patient, discuss the case with the team both informally and at tumor board, and collaborate on surgical decision making. The operation is performed by the "primary" surgeon with the other colleague assisting. Scheduling logistics can almost always be addressed, as tumor cases rarely require emergent intervention. Expertise and its importance to patient care is not a zero-sum game. The perspectives and experiences of pediatric urologists and general surgeons are complementary, and their collaboration in these difficult cases can only add to the knowledge and experience brought to bear on the patient's care and outcome. Indeed, although pediatric urologists are uniquely qualified to operate on the kidney, we must concede that most pediatric general surgeons have more experience dealing with solid tumors generally. There are no good arguments against a collaborative approach other than logistics and ego. This collaborative approach benefits not only the patient but also the surgeons and the institution. The experience of each surgeon is doubled by being involved in all of these rare cases rather than only a fraction. The same goes for the educational opportunities for residents and fellows in the respective departments. Collaborating on these challenging cases also builds collegiality, which can lead to other collaborative opportunities such as managing patients with major congenital anomalies or developing a fetal surgical program. In short, a collaborative approach is the best approach for patients, for individual surgeon development, for oncology program development, and for building larger collaborations in areas beyond oncology.

When an equitable collaborative approach is not achievable, the next best option is an inequitable collaborative approach in which the patients are preferentially sent to 1 service to serve as the "primary" surgical team, but collaboration occurs as described earlier. This approach offers all the advantages of an equitable collaborative approach, although it may be construed as "unfair" to the secondary team. It also is prone to deteriorate into a competitive approach if the secondary team loses enthusiasm and interest or the primary team decides that it no longer cares to include the secondary team.

The competitive model—whether equitable or not —is the least desirable approach. It not only forfeits the benefits that come from collaboration but also often leads to animosity between surgical divisions, undercutting opportunities for collaboration in other areas.

It is fine for pediatric urologists to agree that we should be important members of the team, caring for children with genitourinary tumors. However, without a strategy to convince those with the primary decision-making power that our participation is important, no progress is made. We must negotiate our role in open discussions, emphasizing our desire for collaboration and the benefits it brings to patients, our general surgery colleagues, the oncology team, and programmatic development. To support our position, it is important that pediatric urologists show an interest and demonstrate expertise in pediatric urologic oncology. We should attend tumor board whenever a genitourinary tumor is being presented whether we are formally involved in a