cancer, the chance of maintaining potency postoperatively is only about 10%.

Surgical technical points include dividing the lateral prostatic pedicles close to the prostate at least on the side opposite to the known tumor, sacrificing the neurovascular bundle, if necessary, on the side of tumor to encompass the disease, carefully dissecting the membranous urethra to prevent injury to the cavernous nerves, and using a vertical rather than a transverse division of Denonvilliers's (ventral rectal) fascia for perineal exposure.

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Transrectal Ultrasonography of the Prostate

PROSTATIC ADENOCARCINOMA is currently the second most common male cancer and the second leading cause of cancer deaths. Despite advances in the treatment of localized cancer of the prostate, including improvements in surgical techniques with resulting decreased morbidity and novel approaches to radiation therapy, only about 50% of men have clinically localized disease amenable to such approaches. Transrectal ultrasonography offers the best method for imaging the prostate and has many applications in the management of this ubiquitous neoplasm.

Despite its introduction several years ago, transrectal ultrasonography has only recently received widespread investigation and clinical acceptance. Technical advances that have resulted in excellent imaging include the observation that transducers in the 6- to 7-MHz range offer the optimum balance between lesion resolution and organ penetration, and the development of probes that allow imaging of the prostate in the axial and sagittal planes (biplanar). It is now widely accepted that on transrectal ultrasonography most carcinomas appear as hypoechoic lesions in the peripheral zone (adjacent to the rectal surface) of the prostate.

The transrectal ultrasound examination (and biopsy) is most often done in a clinician's office and requires no anesthetic. We recommend giving a Fleet's enema before the procedure and, if a biopsy is anticipated, routinely administering an aminoglycoside or oral quinoline. With the patient in the lateral decubitus position, a 2- to 3-cm diameter probe is inserted in the rectum, and images are taken from the base of the bladder to the apex of the prostate in the axial and sagittal planes.

Transrectal biopsy of suggestive lesions is readily done without the use of anesthesia, using a spring-loaded gun that, combined with a biopsy needle, obtains excellent tissue cores. This instrument is placed through a biopsy guide on the prostate probe and, under ultrasound guidance, the needle is placed within the lesion and a specimen taken. It must be noted that a number of noncancerous lesions have a sonographic appearance indistinguishable from carcinoma. These include benign hyperplasia, acute and chronic inflammation, atrophy, skeletal muscle, and prostatic intraepithelial neoplasia (a putative premalignant lesion). In our experience with more than 400 such biopsies, 35% reveal carcinoma.

Although biopsy guidance may be the greatest use of transrectal ultrasonography, other applications include the staging of an established malignant tumor, monitoring of radiation or androgen ablation therapy, and the early detection of adenocarcinoma. The issue of screening has generated considerable attention. The combination of transurethral ultrasonography and prostate-specific antigen may allow the identification of even a greater number of cases of prostate cancer. In this neoplasm, where the pathologic incidence far exceeds the clinically manifested disease, the appropriateness of screening is controversial. A prospective, randomized clinical trial is mandatory to determine the effectiveness of ultrasonography not only for detecting carcinoma but, more important, for improving the rates of patient morbidity and mortality.

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Newborn Circumcision Controversy

FEW TOPICS engender as much controversy as that of newborn circumcision. In 1975 the American Academy of Pediatrics (AAP) suggested that "there is no absolute medical need for routine circumcision of the newborn." In 1970 almost 90% of newborn boys in the United States were circumcised and, probably because of this change in attitude from the AAP, by 1988 it was estimated that the percentage had fallen to about 60%. Organizations such as the National Organization of Circumcision Information Resource Centers (NOCIRC) became active in outlining reasons to end routine newborn circumcision. These included saving the protective role of the foreskin, decreasing the risks and complications of the procedure, eliminating pain from the circumcision, and obviating the reputed long-term psychological effects and purported sexual dysfunction. Finally, they raised questions as to the ethical and legal issues raised by operating on a nonconsenting infant.

In 1975 a decreased incidence of urinary tract infections was described in circumcised male infants when compared with uncircumcised infants, and then again in 1986, evidence was outlined for the decreased incidence of urinary tract infections in circumcised male infants. A tenfold increase in the incidence of urinary tract infections was found in noncircumcised compared with circumcised infants, and because of these data, it was suggested that there was at least one medical benefit for the practice of routine, neonatal circumcision. Because of these findings, a new task force on circumcision of the American Academy of Pediatrics was formed and the report released in April 1989. The report suggested that properly done newborn circumcision prevents phimosis, paraphimosis, and balanoposthitis and has been shown to decrease the incidence of cancer of the penis. Further, it

stated that "it may result in a decreased incidence of urinary tract infections" and that "evidence concerning the association of sexually transmitted disease and circumcision is conflicting."

In summary, the AAP suggested, in contradistinction to its 1975 position, that newborn circumcision has potential medical benefits and advantages as well as disadvantages and risks, and that benefits and risks should be explained to the parents and informed consent obtained. Although the final word has not been written about this controversial and provocative topic, further studies may be needed to answer many questions as to its efficacy and desirability.

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Urologic Care of Children With Myelodysplasia

IN THE PAST 10 YEARS many changes have occurred in the care of children with myelodysplasia, mirroring the increased understanding of the functional abnormalities in the lower urinary tract. The use of diapers or supravesical diversion is no longer acceptable, as in most cases, continence is readily achievable. Urodynamics have shown that incontinence in these patients is due to an abnormally increased bladder pressure—poor compliance, hyperreflexia, or a combination of both—and inefficient emptying, associated with a bladder outlet that has a fixed resistance and is unable to respond to changes in abdominal or detrusor pressure. The upper urinary tract is sensitive to an abnormally increased bladder pressure, producing vesicoureteral reflux, hydronephrosis, and, eventually, renal deterioration.

This vesicourethral dysfunction is easily evaluated in the neonatal period urodynamically, identifying those cases of possible upper tract deterioration. Early intermittent catheterization along with the administration of anticholinergic medication, such as oxybutynin chloride, has been shown to prevent these changes and reverse reflux or hydronephrosis if present. About 10% of infants will require this early intervention, and no problems have been encountered with this form of management. Difficulty catheterizing an infant or further renal deterioration occurring despite these conservative measures should be a strong indication for vesicostomy.

Most children will simply be followed up on a regular basis with renal ultrasonography and urine cultures. Attempts to achieve continence will be made, assuming there is no further renal deterioration, at around 3 to 4 years of age. Intermittent catheterization and the use of anticholinergic medication are the mainstays of treatment. The use of imipramine hydrochloride, ephedrine, or both is occasionally required for satisfactory continence. More than 80% of myelodysplastic children can achieve continence in this way. For those who remain incontinent, surgical intervention is required. The bladder outlet may be enhanced by a compressive fascial sling, or an artificial sphincter may be implanted. These procedures need to be combined with an augmentation cystoplasty to reduce the bladder pressure and allow appropriate urinary storage. These reconstructive techniques may also be used in those myelodysplastic patients who have had a previous diversion and have become unhappy with, or have problems with, their stoma or external appliance (undiversion). Some patients, often chairbound girls, may require some form of supravesical diversion. Satisfactory results have always been difficult in these patients because of their body habitus, but a continent catheterizable urinary reservoir can now be constructed so that an external appliance is no longer necessary.

Another technique that shows promise for the future is intravesical electrical stimulation; increased bladder control has been achieved with this intensive therapy.

Using these techniques, the prospects for urinary continence and normal renal function are now excellent in most children born with a myelomeningocele deformity.

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