physiatrist, etc) for counseling or individual guidance may be prohibitively costly, as these services are often not covered by insurance, and patients may not be willing to pay.

Bottom line—at every office visit, encourage patients to increase their exercise and watch what they eat as part of prevention. If they are willing to see a dietician, by all means send them.

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Does neonatal circumcision decrease morbidity?

EVIDENCE-BASED ANSWER

Evidence suggests that neonatal circumcision decreases the incidence of childhood urinary tract infections, phimosis, paraphimosis, balanitis and other genital dermatoses, invasive penile cancer, and the sexually transmitted diseases human papilloma virus (HPV) and HIV (strength of recommendation [SOR]: **B**, based on case control and cohort studies). The benefits of decreased incidence of HPV and HIV infections go beyond the index patient and have public health implications on the transmission of these diseases (SOR: **B**). Further, a decrease in HPV incidence and transmission may lead to a lower incidence of cervical cancer (SOR: **B**).

While there appears to be some evidence for reduced morbidity with routine circumcision, decisions regarding routine neonatal circumcision requires balancing risks and benefits of the procedure with the alternatives in the context of social, familial, and religious beliefs.

EVIDENCE SUMMARY

Observational studies have shown at least a 10- to 12-fold increase in urinary tract infections (UTIs) in uncircumcised male infants compared with their circumcised counterparts.[1] The number of male infants that need to be circumcised to prevent 1 UTI is estimated to be between 44 and 100.[2,3] The only randomized controlled trial of circumcision for UTI prevention was not during the neonatal period (average age was 30 months) and focused on secondary prevention.[4] It demonstrated a statistically significant decrease in the rate of bacteriuria. The long-term effect on UTI incidence, renal scarring, and subsequent complications such as hypertension and end-stage renal disease is unknown.

Evidence from case series supports the protective effect of circumcision on the rates of penile cancer. A review of 592 cases of penile cancer revealed that none of those affected had been circumcised in infancy.[5] In another series of 89 men with penile cancer, only 2 had been circumcised in infancy, while 87 were uncircumcised.[6] Since HPV is thought to be a major etiologic agent in both penile cancer and cervical cancer, investigators studied the link between circumcision status and cervical cancer. In a meta-analysis of 7 case-control studies, penile HPV was detected 2.7 times more often in uncircumcised men after controlling for confounders.[7] In this same meta-analysis, monogamous female partners of high-risk circumcised men (men with more than 6 lifetime partners) had a lower risk of cervical cancer than women whose high-risk partner was uncircumcised (adjusted odds ratio=0.42; 95% confidence interval [CI], 0.23–0.79).[7]

The evidence that circumcision prevents most sexually transmitted diseases is not very strong, with the exception of HIV and genital ulcer disease. Most of these studies are from sub-Saharan Africa, where rates of HIV infection are extremely high. A meta-analysis of 15 observational studies in Africa, with adjustment for potential confounding factors, found that circumcision decreased the risk of acquiring HIV by more than half (relative risk [RR]=0.42; 95% CI, 0.34–0.54).[8] A more recent prospective study from India showed a strong protective effect of circumcision against HIV infection (RR=0.15; 95% CI, 0.04–0.62).[9] This study found no protective effect of circumcision against herpes, syphilis, or gonorrhea, suggesting a biological rather than a behavioral explanation for the pro-

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tective effect of circumcision against HIV.

A conservative estimate of the post-neonatal childhood circumcision rate for purely medical reasons is 2% to 5%; estimates go as high as 7% to 10%.[10] The most common medical indication for circumcision is phimosis, followed by recurrent balanitis and paraphimosis. Circumcision may also be protective against genital dermatoses; a case-control study found an age-adjusted odds ratio of 3.2 (95% CI, 2.3–4.6) for penile skin diseases in uncircumcised men compared with circumcised men.[11]

RECOMMENDATIONS FROM OTHERS

Circumcision rates vary widely worldwide, with strong cultural and religious preferences. Most major organizations have cautiously neutral opinions on circumcision, stating that medical benefits are not large enough to justify routine neonatal circumcision. The American Academy of Pediatrics Task Force on Circumcision recommends parents "should be given accurate and unbiased information" and that "parents should determine what is in the best interest of the child."[12] The American Medical Association, American College of Obstetrics and Gynecology, and the American Academy of Family Physicians all use similar statements.[13–15]

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CLINICAL COMMENTARY

Explain risks and benefits of circumcision to parents so they make informed decisions

A dilemma exists in the practice of recommending circumcision to parents of newborn males. Although the evidence shows that morbidity is decreased in circumcised males, the occurrence of complications (such as UTI or balanitis) is believed to be preventable through good hygiene, and the incidence of the preventable disease (such as penile cancer) is so low in the general population as to not justify the procedure. The challenge is there because the procedure is not without pain or risk of complications.

This is the basis for the American Academy of Pediatrics not recommending routine neonatal circumcision. The consensus was that the evidence was not sufficient to support it. Since then, many studies have been published on HPV and HIV transmission, the incidence of phimosis and paraphimosis, UTI, and balanitis, and how circumcision reduces the incidence of these diseases. Again, these are believed to be preventable through hygiene and condom use. In practice, it is difficult to persuade parents because these complications usually occur much later in life.

Most patients made their decisions on circumcision based on religious or cultural experiences. My practice has a large Hispanic immigrant pop-