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Gregory R. Istre

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Letters to the Editor

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Acetaminophen Toxicity Nomogram Error: *Barkin's Textbook of Pediatric Emergency Medicine*

To the Editor.—

While assisting in the management of a child with an acetaminophen overdose, an error in the nomogram used to help predict the risk of acetaminophen toxicity was noted in *Barkin's Textbook of Pediatric Emergency Medicine—Concepts and Clinical Practice*, second edition. The units of measure on both the left and right axis of the Nomogram (page 538) are mislabeled (reversed). Use of this nomogram by an emergency medicine physician delayed institution of lifesaving therapy.

The units on the left axis, "Acetaminophen plasma concentration ($\mu\text{m per L}$)" with the numerical value of "0–1000", **should be labeled micrograms per mL ($\mu\text{g/mL}$)**.

The units on the right axis, "Acetaminophen plasma concentration ($\mu\text{g per mL}$)" with the numerical value "0–6000", **should be labeled micromoles per liter ($\mu\text{mol/L}$)**.

In addition, please note that the "probably toxic line" should go from 200 $\mu\text{g/mL}$ at 4 hours to 50 $\mu\text{g/mL}$ at 12 hours.

We hope that this correction prevents an error in managing an acetaminophen overdose.

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Newborn Circumcision and Urinary Tract Infections

To the Editor.—

I commend Drs Schoen, Colby, and Ray for their recent article that once again shows the vast majority (98%) of uncircumcised males do not develop urinary tract infections (UTIs) in the first year of life.¹ Their data verifies that 52 circumcisions need to be performed to prevent 1 UTI, and therefore 51 out of 52 circumcised males do not benefit from their circumcision but instead only suffer pain and permanent disfigurement of their genitalia.

I also applaud them for showing that the cost of a UTI in an uncircumcised male averages \$1179. Because the charge for a circumcision in our hospital is \$382 (a reasonable amount given physician time for the circumcision including getting consent and checking for bleeding later, nursing time, lidocaine and EMLA, sterilization of equipment, and use of nursery space), the cost to perform 52 circumcisions is \$19 864, making routine circumcision to prevent UTIs 17 times more expensive than treating the exceedingly rare UTI and its sequelae.

Once again, looking at the data with logic and an unbiased eye confirms that routine neonatal circumcisions should not be performed.

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REFERENCE

1. Schoen E, Colby CJ, Ray GT. Newborn circumcision decreases incidence and costs of urinary tract infections during the first year of life. *Pediatrics*. 2000;105:789–793

To the Editor.—

The article by Schoen et al¹ discusses the need to present the benefits of newborn circumcision. It is essential that parents be fully informed before making a decision whether or not to circumcise their sons, and providing them with all the pertinent information is the responsibility of all health care providers.² In discussing with parents the risks associated with circumcision, the focus is heavily weighted on the problems and complications in the immediate postoperative period, with some reference to the benefits of reduced UTIs and penile cancer. I would like to expand the discussion, beyond infancy and adulthood, to the complications of noncircumcision for the elderly dependent male and his caregiver.

As clinical nurse specialist in an extended care facility caring for an older male population, I would like to address the issue of circumcision from the gerontological perspective. We assume that parents make decisions about circumcision with the child's best interest in mind, but the information provided parents is inadequate because it does not address the question of what happens if that person is unable to care for his own hygiene needs. The geriatrics community has had little say and no input into the information that is presented to parents at the time they are deciding whether to circumcise their infant sons, yet the result of this decision is played out daily in nursing homes, in long-term care facilities, and in the homes of caregivers. Ultimately, it is the geriatrics community that is faced with care issues when one can no longer meet one's own care needs. Therefore, the information pediatricians present must include how this decision will affect the care, well-being, and comfort of an older male 70 or 80 years hence.

Good perineal-genital care for an uncircumcised male involves retracting the foreskin to expose the glans or head of the penis, washing and drying the glans, and replacing the foreskin. For younger patients who are unable to care for themselves, as a result of either trauma or disease, the need to have others perform this intimate care is embarrassing and stressful. The procedure of being cleaned is also emotionally difficult for the older uncircumcised patient. However, for the majority of older people who need this hygiene care performed because of a dementing illness, the reactions range from personally disturbing to disruptive behavior. Frequently, the patient misinterprets the care and strikes out in terror, kicking and scratching caregivers, whether family or nursing staff.

On the other hand, wives and daughters complain, in the security of support groups, that they do not even attempt to keep the patient clean, as their efforts are interpreted as an invitation of

sexual activity. Thus, hygiene then becomes inadequate or nonexistent, a setup for inflammation and phimosis. As the population ages and more families are called on either to provide care or to institutionalize a member of the family, we in the field of health care must consider the effect of noncircumcision on all males and provide information and advice to those making the decision whether to circumcise an infant. Hopefully, that infant will grow up and always be able to care for himself, but in discussing this issue, we also need to consider the "what-ifs."

The pediatric community has long been in the forefront of preventive care. Pediatricians have led the way in educating the public to the need for infant immunizations, the need for proper diet and exercise, and the need for ongoing monitoring of growth and behavior patterns that contribute to a healthy childhood and adulthood. Among the aging, the fastest-growing segment of the population are those about 80 years of age, and as health care continues to improve, these numbers will continue to grow.

I suggest it is time to look at the decisions of circumcision as a preventive health concern for the later years with all pediatricians cognizant of how noncircumcision affects the elderly dependent male and his caregiver. I strongly urge my health care colleagues to include information from the gerontological perspective when providing information to parents contemplating circumcision.

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REFERENCES

1. Schoen EJ, Wiswell TE, Moses S. New policy on circumcision—cause for concern. *Pediatrics*. 2000;105:620–623
2. AAP Task Force on Circumcision. Circumcision debate. *Pediatrics*. 2000; 105:641–642

To the Editor.—

The recent article by Schoen et al¹ adds little that is new to the body of work on increased UTIs in uncircumcised males, as noted in the excellent commentary by Wiswell, the originator of this line of investigation, which appears in the same issue.²

But as always, Dr Schoen persists in his advocacy of universal male circumcision. I note with interest that Dr Wiswell's commentary does not discuss this aspect of the article by Schoen et al, so I will take this opportunity to point out some issues.

Dr Schoen gives us an analysis of the cost of early UTIs in uncircumcised males, and, yes, there is a significant cost, but he fails to analyze the situation in reverse—the cost of circumcising all males in relation to savings from preventing UTIs and serious complications.

Assume for the sake of argument the worst case of 10% bacteremia, quoted in Wiswell's commentary,² as the highest likely complication rate, or about 13 of the 14 893 males in the original cohort (note that the actual number of proven bacteremia cases in the Schoen study is 2). Also assume a conservative cost of \$100 for each circumcision (including no costs for complications after circumcision). Over \$1.48 million would be spent to prevent 129 total preventable UTIs (without congenital anomalies) and 12 to 13 cases of potentially serious complications with a total short-term treatment cost of \$155 628 (cost of the care for the 3 congenital anomaly cases not excluded). This means for each UTI prevented by universal circumcision, the cost is \$11 545! For each complicated case averted, the cost is \$114 561! With universal circumcision, the cost of averting a single complication is on par with total short-term cost of care for all UTIs in the uncircumcised.

Before such an approach can even be considered, one must ask if any alternative is more effective in reducing complications. Dr Wiswell's comments on more aggressive screening of febrile infants, at least for those <6 months of age, for UTI is one such approach.²

Two other possible approaches also need study:

1. Dipstick urine screening of uncircumcised males at 1-, 2-, and 4-month well visits.
2. A far simpler "surgical" procedure—using a probe to free foreskin adhesions, allowing more retraction of the newborn foreskin to facilitate hygiene.

All 3 options above are likely to be far more cost-effective than universal circumcision, and also preserve the penile foreskin.

Until it is determined that any of these alternative approaches will not reduce the rate of UTIs and complications from them in young uncircumcised males, Dr Schoen's continued insistence on universal male circumcision makes no more sense than the other favorite operation of the 1950s—the ubiquitous tonsillectomy. I will go further and opine that advocating any surgical procedure be universal is counterintuitive and highly unlikely to meet reasonable cost-effectiveness criteria.

From a "medical necessity" point of view, circumcision must be considered a cosmetic procedure, not a medically justified operation.

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REFERENCES

1. Schoen EJ, Colby CJ, Ray GT. Newborn circumcision decreases incidence and costs of urinary tract infections during the first year of life. *Pediatrics*. 2000;105:789–793
2. Wiswell TE. The prepuce, urinary tract infections, and the consequences. *Pediatrics*. 2000;105:860–861

To the Editor.—

Recent studies by Schoen et al^{1,2} made use of the extensive database at Kaiser Permanente Medical Care Program of Northern California. Numerous potential confounding epidemiologic factors were not taken into consideration in the analysis of the possible association between circumcision status and either UTI or penile cancer.

With the Kaiser database that could have controlled for these factors, we were disappointed that the investigators chose to provide only a case series¹ and a comparison of raw data.²

The incidence of UTI is influenced by rooming in,³ race,⁴ breastfeeding,^{5–7} prenatal maternal UTI,⁸ level of parental education,⁹ hygienic practices,¹⁰ previously bacterial or viral infection,⁷ previous course of antibiotic,⁷ premature birth,^{11–13} urine collection method,^{14–16} and diagnostic criteria.¹⁷ Whether neonatal circumcision fits in among these factors has yet to be adequately addressed. A Canadian study eliminated infants with perinatal problems and controlled for socioeconomic status. The association between a normal foreskin and UTI was lower than reported in other studies.¹⁸ Controlling for other confounding factors might prove there is no association between the normal foreskin and UTI.

Penile cancer has been linked to genital warts, number of sexual partners, smoking, and penile rashes.¹⁹ Schoen et al could have used their database to establish cohort controls, matched for year of birth, race, and socioeconomic status. Because the neonatal circumcision rate steadily increased during the early part of the 20th century, it is impossible to render useful information from a case series without matched controls.

The claims made by the authors exaggerate what their study design permits. We encourage Schoen et al to revisit their database and look forward to further analysis.

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REFERENCES

1. Schoen EJ, Oehrli M, Colby CJ, Machin G. The highly protective effect of newborn circumcision against invasive penile cancer. *Pediatrics*. 2000; 105(3). URL: <http://www.pediatrics.org/cgi/content/full/105/3/e36>
2. Schoen EJ, Colby CJ, Ray GT. Newborn circumcision decreases incidence and cost of urinary tract infections during the first year of life. *Pediatrics*. 2000;105:789–793
3. Winberg J, Bollgren I, Gothefors L, Herthelius M, Tullus K. The prepuce: a mistake of nature? *Lancet*. 1989;1:598–599
4. Shaw KN, Gorelick M, McGowan KL, Yakscoe NM, Schwartz JS. Prevalence of urinary tract infection in febrile young children in the emer-

gency department. *Pediatrics*. 1998;102(2): URL: <http://www.pediatrics.org/cgi/content/full/102/2/e16>

5. Pisacane A, Graziano L, Mazzarella G, Scarpellino B, Zona G. Breast-feeding and urinary tract infection. *J Pediatr*. 1992;120:87-89
6. Mårild S, Jodal U, Mangelus L. Medical histories of children with acute pyelonephritis compared with controls. *Pediatr Infect Dis J*. 1989;8: 511-515
7. Patrick MJ. Influence of maternal renal infection on the foetus and infant. *Arch Dis Child*. 1967;42:208-213
8. Savage DC, Wilson MI, McHardy M, Dewar DA, Fee WM. Covert bacteriuria of childhood. A clinical and epidemiological study. *Arch Dis Child*. 1973;48:8-20
9. Watson SJ. Care of the uncircumcised penis. *Pediatrics*. 1987;80:765
10. Maherzi M, Guignard JP, Torrado A. Urinary tract infection in high-risk newborn infants. *Pediatrics*. 1978;62:521-523
11. Airede AI. Urinary-tract infections in African neonates. *J Infect*. 1992;25: 55-62
12. Eliakim A, Dolfen T, Korzets Z, Wolach B, Pomeranz A. Urinary tract infection in premature infants: the role of imaging studies and prophylactic therapy. *J Perinatol*. 1997;17:305-308
13. Schlager TA, Handley JO, Dudley SM, Hayden GF, Lohr JA. Explanation for false positive urine cultures obtained by bag technique. *Arch Pediatr Adolesc Med*. 1995;149:170-173
14. Fleiss PM. Explanation for false positive urine cultures obtained by bag technique. *Arch Pediatr Adolesc Med*. 1995;149:1041-1042
15. Robson WL, Leung AK. Explanation for false positive urine cultures obtained by bag technique. *Arch Pediatr Adolesc Med*. 1995;149:1042, discussion 1042
16. Hoberman A, Wald ER. Urinary tract infections in young febrile children. *Pediatr Infect Dis J*. 1997;16:11-17
17. To T, Agha M, Dick PT, Feldman W. Cohort study on circumcision of newborn boys and subsequent risk of urinary-tract infection. *Lancet*. 1998;352:1813-1816
18. Maden C, Sherman KJ, Beckmann AM, et al. History of circumcision, medical conditions, and sexual activity and risk of penile cancer. *J Natl Cant Inst*. 1993;85:19-24

To the Editor.—

As our general pediatric inpatient team was seeing patients, we began a discussion concerning a 9-month-old uncircumcised male hospitalized with his first episode of UTI. The parents of the child had asked whether circumcision would have been beneficial in preventing the occurrence of UTI. To answer the parent's question, the team formed the clinical question: Among uncircumcised male infants, what is the risk of UTI as compared with circumcised males and what are the associated costs/benefits of such intervention?

A search was performed using PubMed¹ and the keywords "UTI, uncircumcised, and children." In our search of the literature, the article by Schoen et al² was reviewed. On initial inspection, this article seemed to provide overwhelming support of circumcision in decreasing the risk of UTI occurrence in male infants. However, from a cost-effective standpoint, we found that the savings from UTI prevention did not outweigh the cost of circumcision. According to the authors, the incidence of UTI in uncircumcised males is 1 in 39.6 control event rate (CER), as compared with 1 in 439.5 for circumcised male infants experimental event rate (EER). On further analysis of the data, we determined the absolute risk reduction (ARR) to be only 0.0230 (see Tables 1 and 2 for calculations). Using this information we determined that the number of male infants needing to be circumcised to prevent 1 episode of UTI was 43.5 (number needed to treat [NNT]). Using the authors' data that the cost of UTI is \$1111 and our NNT of 43.5, we calculated that to make circumcision a cost-effective measure

TABLE 1. Data Analysis Using Schoen et al Data Determining the Number of Males Circumcised to Prevent One UTI

Relative risk (RR) =
$\frac{\text{Experimental event rate (EER)}}{\text{Control event rate (CER)}} = \frac{22/9668}{132/5225} = 0.090$
Absolute risk reduction (ARR) = CER - EER = 0.0253 - 0.00228 = 0.0230
Number needed to treat (NNT) = 1/ARR = 1/0.0230 = 43.5

TABLE 2. Data Using Schoen et al Data Determining Number of Males Circumcised to Prevent One Hospital Admission

Relative risk (RR) =
$\frac{\text{Experimental event rate (EER)}}{\text{Control event rate (CER)}} = \frac{4/9668}{38/5225} = 0.057$
Absolute risk reduction (ARR) = CER - EER = 0.00727 - 0.000414 = 0.00686
Number needed to treat (NNT) = 1/ARR = 1/0.00686 = 146

to decrease the incidence of UTI in males, the cost of circumcision would have to be >\$25.54 per circumcision. This figure does not include the cost of complications occurring in circumcision. Similarly, we applied this data analysis to determine that the number of male infants needing to be circumcised to prevent 1 hospital admission is 146.

Therefore, we conclude that although circumcision may be beneficial in decreasing the likelihood of UTI occurrence in male infants, it may be not a realistic or cost-effective strategy. We feel that this further analysis of the data presented by Schoen et al is needed to make a decision regarding the practice of performing circumcisions with the goal of preventing UTIs.

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REFERENCES

1. *PubMed*. <http://www.ncbi.nlm.nih.gov>
2. Schoen EJ, Colby CJ, Ray GT. Newborn circumcision decreases incidence and cost of urinary tract infections during the first year of life. *Pediatrics*. 2000;105:789-793
3. Laupacis A, Sackett D, Roberts R. An assessment of clinically useful measures of the consequences of treatment. *N Engl J Med*. 1988;30: 1728-1733
4. Wennerstrom M, et al. Renal function 16 to 26 years after the first urinary tract infection in childhood. *Arch Pediatr Med*. 2000;154:339-345
5. Birken CS, Parkin PC. In which journals will pediatricians find the best evidence for clinical practice? *Pediatrics*. 1999;103:941-947

To the Editor.—

It's always invigorating to see old warriors remount old war horses. Dr Schoen, an unflagging advocate of routine male circumcision, is back, this time armed with statistics. Like the rest of us in this buck-shaving era of primary care, he's using dollars to prove why he's right. Let's take a closer look.

Like the abortion issue, assaying the truth goes beyond dollars, and circumcision policy isn't resolvable with a ledger. America's habituation to routine circumcision is not less aberrant viewed from a cost/benefit standpoint than it is looked at from a sociologic perspective. But, in terms of dollars expended, using Dr Schoen's current and credible figures, routine male circumcision is indefensible from a cost/benefit standpoint, as a standard of newborn care.

Examining the impressive follow-up of the large number of newborns studied, representing a contemporary population of infants in which a large proportion (35%) of the male newborns were not circumcised, Dr Schoen reiterates the figures first described by Wiswell et al: in the first year of life, baby boys born in California who retain their foreskins experience a 10-fold increase in UTI when compared with their circumcised peers.

Dr Schoen itemizes the cost of caring for 132 episodes of UTI in

5225 uncircumcised males, and notes that the cost of caring for the UTIs in the cohort of uncircumcised males exceeded the cost for caring for all the UTIs in their uncircumcised peers. Well and good. However, Dr Schoen doesn't bother to price out the other side of the circumcision coin.

Assuming it cost \$250 to circumcise each boy, between supplies, nursing care, and physician charges, it cost \$2 417 000 to circumcise those 9668 baby boys, the 65% who experienced only 22 episodes of UTI. Assuming a 10-fold reduction in UTI incidence, 120 of the 132 cases of Schoen's figure of \$1111 for the cost of caring for each male infant diagnosed with UTI, circumcising all those boys who were left intact would have saved \$133 320 in male UTI care costs avoided. He fails to mention it would have cost another \$1 306 250 to do so. That's—you bean counters—\$8.33 spent on circumcision for every \$1 of UTI care expense prevented. Such a deal! Considering all the time, pain, and paperwork involved in routine circumcision in this country, it's no wonder the rest of the civilized world of medical care looks at us and just shakes its head. And, unlike the money our obstetrician colleagues waste on routine fetal monitoring, we can't even blame it on the lawyers.

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In Reply.—

Dr Bartman comments on the fact that infant urinary tract infections (IUTIs) develop in only 2% of uncircumcised male infants. This statement implies that infant circumcision is not an important health benefit because 98% of uncircumcised infants do not get IUTIs.

If all infant boys in the United States were left uncircumcised, that same annual incidence rate of 2% among 2 million newborn boys would represent 40 000 cases of IUTI in this country annually, making IUTI one of the most preventable diseases occurring in the first year of life.

Dr Bartman also states that circumcised men "suffer pain and permanent disfigurement." The 1999 American Academy of Pediatrics (AAP) Task Force Report on Circumcision¹ documents that local methods of pain relief are safe and effective. As for appearance, if we accept Dr Bartman's assessment of the circumcised penis, the United States is home to >80 million permanently disfigured boys and men (ie, 70% of 120 million males). A study of sexually active women in middle America² showed that about 75% preferred the circumcised penis, with 77% stating that it looked "more natural" (2:11) The well-known California writer, Anne Lamott (in her book *Operating Instructions*), decided to have her son circumcised because of ease of cleanliness and better appearance, believing that uncircumcised penises "look sort of marsupial, or like little rodents stuck in garden hoses" (3:25). Obviously, penile "beauty" versus "disfigurement" is in the eye of the beholder.

In his cost calculations, Dr Bartman fails to consider the point we thought we made clear. Our cost figures simply represent the 10-fold increased cost of IUTIs among uncircumcised boys during the first year of life. Ours was not a cost-benefit study; such a study would require determination of the lifetime medical benefits of circumcision and would include calculation of the value of circumcision's preventive effects not only on IUTI in the first year but on penile cancer, human immunodeficiency virus (HIV), certain other sexually transmitted diseases (STDs), balanoposthitis, penile dermatoses, phimosis, and—most important—on the cost of postneonatal circumcision done for whatever reason.

Circumcision done after the neonatal period costs about 10 times as much as newborn circumcision done in the nursery before the infant is discharged from the hospital. At our Kaiser Permanente (KP) hospitals, the cost of circumcision for a newborn boy is about \$200. (The figure cited by Dr Bartman—\$382—did not represent "costs" but instead represented "charges," which can amount to whatever the free market will bear). In the 3-year period 1996–1998, 573 postneonatal circumcisions were done in KP-Northern California at a mean cost of \$1921 each. During this period, there were 11 149 uncircumcised newborn boys, a postneonatal circumcision rate of 9.9%. Our costs for neonatal and postneonatal circumcision are consistent with data of Jayanthi et

al.⁴ In Finland, which has a national health care program in which routine newborn circumcision is not done, in the period 1996 through 1998, 6438 postneonatal circumcisions were done (generally for phimosis or balanoposthitis), during which time there were 90 607 newborn boys—a postneonatal circumcision rate of 7.1% (M. Gissler, personal communication, February 7, 2000, National Research and Development Centre for Welfare and Health [STAKES], Helsinki, Finland).

The letters and calculations of Dr Goldenring, Dr Phelan and his 2 medical students, and Dr Canfield also confuse "cost differential" for treating IUTI in the first year of life with "cost benefit" of neonatal circumcision realized over a lifetime.

Despite the high risk ratios (RR) for invasive penile cancer and IUTI, Drs Cold and Storm raise the question of confounding factors. In studying IUTI and invasive penile cancer, all of the work comparing uncircumcised and circumcised men has found increased risk of disease in uncircumcised men. In cases of IUTI, the RR in uncircumcised men has varied from 3 to >50 times; and in cases of invasive penile cancer, the RR in uncircumcised men has varied from 3 times to an overwhelming multiple.⁵ Drs Cold and Storm chose studies with the lowest RR (ie, RR of about 3) in both conditions as examples of the effects of confounders.

A 300% increased risk is clinically significant, but both of the studies chosen by Drs Cold and Storm are flawed in a way that could explain the lower RR reported in those studies than in other studies. Dr. Thomas Newman of the University of California, San Francisco, found that IUTI is underdiagnosed because of failure of clinicians to obtain urinalysis in febrile infants.⁶ Thus, a notable observation is that easy access to laboratory facilities characterized the studies that showed the greatest preventive effects of circumcision against IUTI: a US military study,⁷ a study done in a large health maintenance organization,⁸ and a study done in an emergency department.⁹ In contrast, in the study by To et al¹⁰—which reported the experience of multiple providers in various practice settings—poor laboratory availability could have led to underestimation of IUTI incidence.

Our data clearly showed the invalidity of combining carcinoma in situ, a benign condition, with invasive penile cancer, a devastating disease: our comparison of uncircumcised and circumcised men showed an RR of 22 for invasive penile cancer and an RR of only 3 for carcinoma in situ.⁵ In Maden's study of penile cancer,¹¹ carcinoma in situ and invasive penile cancer were analyzed together.

The comments of Ms Frank, a nurse at the Veterans Administration Medical Center, raise the issue of genital hygiene later in life. These comments supplement what we know about infant hygiene, ie, that proper cleaning of the penis of an infant or a young boy can be difficult because the foreskin may not physiologically separate from the glans for months—or even years—and thus may leave secretions and bacteria trapped. In men (especially many elderly men) who are physically unable to care for themselves, inadequate hygiene in the presence of a foreskin can result in major mechanical and psychologic problems. We should thus be grateful to Ms Frank for another reminder that in evaluating both the overall health value and cost benefits of newborn circumcision, we must consider a lifetime of preventable health effects. These include the combined effects of IUTIs in infancy; HIV and other STD infections in young adults; penile cancer in older adults; and phimosis, balanoposthitis, penile dermatoses, and genital hygiene in boys and men of all ages.

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REFERENCES

1. American Academy of Pediatrics, Task Force on Circumcision. Circumcision policy statement. *Pediatrics*. 1999;103:686–693
2. Williamson ML, Williamson PS. Women's preferences for penile circumcision in sexual partners. *J Sex Educ Ther*. 1988;Fall/Winter;14:8–12
3. Lamott A. *Operating Instructions: A Journal of My Son's First Year*. New York, NY: Pantheon Books, 1994:25

- Jayanthi VR, Burns JE, Koff SA. Postneonatal circumcision with local anesthesia: a cost-effective alternative. *J Urol*. 1999;161:1301-1303
- Schoen EJ, Oehrli M, Colby CJ, Machin G. The highly protective effect of newborn circumcision against invasive penile cancer. *Pediatrics*. 2000; 105(3). URL: <http://www.pediatrics.org/cgi/content/full/105/3/e36>
- Newman TB, Pantell RH, Bernzweig J, et al. Frequency and yield of tests for urinary tract infection in young febrile infants [Abstract 351]. *Am-bulatory Child Health*. 1997;3(1 pt 2):213.7
- Wiswell TE. Circumcision and urinary tract infection. *Curr Opin Urol*. 1994;4:50-53
- Schoen EJ, Colby CJ, RAY GT. Newborn circumcision decreases incidence and costs of urinary tract infections during the first year of life. *Pediatrics*. 2000;105:789-793
- Herzog LW. Urinary tract infections and circumcision: a case-control study. *Am J Dis Child*. 1989;143:348-350
- To T, Agha M, Dick PT, Feldman W. Cohort study on circumcision of newborn boys and subsequent risk of urinary-tract infection. *Lancet*. 1998;352(9143):1813-1816
- Maden C, Sherman KJ, Beckmann AM, et al. History of circumcision, medical conditions, and sexual activity and risk of penile cancer. *J Natl Cancer Inst*. 1993;85:19-24

Aspirin and Reye's Syndrome

To the Editor.—

The study reported by Ploin et al¹ was well-designed, well-executed, and clearly demonstrated the equivalent effect of albuterol given with a spacer device and with a nebulizer. A small detail caught my eye, and may have bothered other North American pediatricians practicing since at least the 1970s, namely the administration of aspirin to febrile children with viral infections. The literature on Reye's syndrome, recently summarized in editorials by Monto² and by Sarnaik,³ is virtually unanimous that aspirin is a major risk factor for developing Reye's syndrome, especially in the presence of a viral illness.

If—and it is a major “if”—fevers of $\geq 38.0^{\circ}\text{C}$ need treatment and do not respond to acetaminophen, ibuprofen is a safer choice.

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REFERENCES

- Ploin D, Chapuis FR, Stamm D, et al. High-dose albuterol by metered-dose inhaler plus a spacer device versus nebulization in preschool children with recurrent wheezing: a double-blind, randomized equivalence trial. *Pediatrics*. 2000;106:311-317
- Monto AS. The disappearance of Reye's syndrome—a public health triumph. *N Engl J Med*. 1999;340:1423-1424
- Sarnaik AP. Reye's syndrome: Hold the obituary. *Crit Care Med*. 1999; 27:1674-1676

In Reply.—

Reye's syndrome has been related to aspirin intake in children, but the definitive causal relationship is still lacking. As Orłowski¹ demonstrated in 1999, most cases of what would have been called Reye's syndrome in the 1970s and 1980s were actually cases of inborn error of metabolism.

Aspirin remained the first intention antipyretic drug in France until the 1980s (71%), but since then, many French clinicians began to follow the conclusions of American epidemiologic studies. Between 1981 and 1992, the use of aspirin decreased dramatically (–51%) in children with chickenpox or influenza-like syndrome.² A French national survey (November 1995–October 1996) showed that among 11 289 133 children <15 years old, incidence was 15 cases (metabolic disorder in 5 children, unexplained Reye's syndrome in 9 children, no investigations in 1 child).³ The Agence Française du Médicament (French Medication Agency) recommended then that aspirin should not be used in chickenpox and influenza-like syndrome but recommendations didn't concern bacterial infections such as otitis media.

In our clinical trial, febrile children were systematically treated with 1 or 2 antipyretic drugs to minimize the interference between

fever and respiratory assessment. In our daily practice, we totally agree with Dr Fischer to consider that, even in France, acetaminophen is the best choice to treat fever (when needed) in children. Ibuprofen should also be recommended now as the second intention drug to treat viral respiratory tract infections (when needed) in children.

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REFERENCES

- Orłowski JP. Whatever happened to Reye's syndrome? Did it ever really exist? *Crit Care Med*. 1999;27:1582-1587
- Maison P, Guillemot D, Vauzelle-Kervroedan F, et al. Trends in aspirin, paracetamol and non-steroidal anti-inflammatory drug use in children between 1981 and 1992 in France. *Eur J Clin Pharmacol*. 1998;54:659-664
- Autret-Leca F, Jonville-Bera AP, Llau ME, Bavoux F, Saudubray JM, Laugier J, Devictor D, Barbier P, and all French Departments of Pediatrics. Reye's Syndrome in France: A National Registry; 6th Congress of the European Society for Developmental Pharmacology; June 4-5, 1998; Ajaccio, France

A Nontraumatic and Inexpensive Clinical Maneuver to Check Nasal Patency at Birth

To the Editor.—

Neonates are preferential nasal breathers, and nasal obstruction at birth can cause central cyclic cyanosis and represents a potentially life-threatening condition.¹ Causes of neonatal nasal obstruction include choanal atresia, nasal septum deviation, hematoma, encephalocele, etc. Checking choanal patency is then a mandatory routine in the delivery room introducing through each nostril a 6-Fr, side-opened catheter.² However, the catheter may harm the nasal mucosa, and it is a medical cost to be added to the 10-Fr catheter recommended for suctioning secretions through the mouth.³

At the delivery room unit of our Neonatology Division where we attend >3000 deliveries per year, we perform a simple clinical maneuver to check choanal patency. With her/his left little finger, the examiner gently keeps the newborn's mouth closed while the thumb obstructs without compressing the left nostril. The stethoscope's membrane is held by the right hand just under the right nostril. The gentle sound of air flowing out of the tested nare then becomes clearly audible. This maneuver is then repeated on the opposite side. We anecdotally report that in the last 2 years the “nasal air-flow test” has never failed to demonstrate choanal patency even when, in 2 cases, not only the 6-Fr catheters but also the thinner and softer (but more expensive) nasojejunal feeding tubes had failed to probe the newborn's nares. Delivery room baby examiners might find this simple test—to which, to the best of our knowledge, there is no previous reference in the literature—a practical aid in their clinical work.

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REFERENCES

- Hengerer AS, Yanofsky SD. Congenital malformations of the nose and paranasal sinuses. In: Bluestone CD, Stool SE, Kenna MA, eds. *Pediatric Otolaryngology*. Philadelphia, PA: WB Saunders Company; 1996: 831-842
- Guzzetta PC, Anderson KD, Eichelberger MR. General surgery. In: Avery GB, Fletcher MA, MacDonald MD, eds. *Neonatology: pathophysiology*

3. Robertson NRC. Resuscitation of the newborn. In: Rennie JM, Robertson NRC, eds. *Textbook of Neonatology*. Edinburgh, Scotland: Churchill Livingstone; 1999:241-265

Retinopathy of Prematurity: Taking the Next Step

To the Editor.—

Present understanding of the pathogenesis of retinopathy of prematurity (ROP) can be summarized in describing preproliferative and proliferative stages of the disease process. The preproliferative stages probably involve actual or relative hyperoxic and perhaps hypoxic and ischemic injury of and hypercarbia-induced barotrauma to immature retinal capillaries, resulting in shunt formation. An arrest in peripheral retinal vessel development occurs. The inner portion of the peripheral avascular retina (PAR), presumably attributable to an oxygen deficit, begins to elaborate factors that promote neovascularogenesis, thus ushering in the proliferative stages of the disease. With continued progression, fronds of aberrant blood vessels flourish and grow into the vitreous along with myofibroblasts. Contraction of these vascular complexes results in traction retinal detachment.

Knowledge of the pathogenesis of ROP, as understood today, allows for the identification of potential modalities of medical therapy to ameliorate the disease. Indeed, the conceptual basis for performing cryotherapy is to eliminate the potential of the PAR to elaborate factors that stimulate aberrant vessel growth. Similarly, the idea of maintaining a higher blood oxygen saturation for the ROP-affected infant in the STOP-ROP Study¹ was to raise the tissue oxygen level of the inner PAR, which it was hoped would halt the formation of neovascular attracting factors² by this tissue. The marginal results obtained were somewhat disappointing but may be explained by a number of factors, not the least of which were waiting for prethreshold disease to enroll study patients and the physiologic instability of many very low birth weight preterm infants. The study did apparently establish the safety of the prescribed oxygen therapy, when used according to the study protocol. Could starting the oxygen therapy earlier in the disease process have improved outcome?

It is probable that whenever oxygen therapy is started in the proliferative stages of ROP, that time will be required to “quiet down” the undesirable biochemical reactions in the PAR. To “buy this time,” an agent that might directly retard neovascularization and fibroplasia could be simultaneously administered. Such an agent may very well be D-alpha-Tocopherol (DAT) provided in doses to achieve pharmacologic blood levels.³ DAT used in this manner has been shown not to carry an increased risk for sepsis and necrotizing enterocolitis after an age of 8 postnatal weeks.³

As previously suggested,⁴ new or combinations of medical treatments may yet allow for improved outcomes in ROP. Adequate suppression of neovascularization to allow for spontaneous retinal repair in ROP may yet be achievable. Now is the time to consider additional basic science studies and potential future clinical trials involving single or combinations of therapies to halt ROP pathogenesis.

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REFERENCES

1. The STOP-ROP Multicenter Study Group. Supplemental Therapeutic Oxygen for Prethreshold Retinopathy of Prematurity (STOP-ROP): a randomized, controlled trial. I primary outcomes. *Pediatrics*. 2000;105: 295-310
2. Ezra DB. Neovascularogenesis. Triggering factors and possible mechanisms. *Surv Ophthalmol*. 1979;24:167-175
3. Johnson L, Quinn GE, Abassi S, et al. Severe retinopathy of prematurity in infants with birth weights less than 1250 grams: incidence and outcome of treatment with pharmacologic serum levels of vitamin E in addition to cryotherapy from 1985 to 1991. *J Pediatr*. 1995; 127:632-639

4. Katzman GH. Retinopathy of prematurity: is suppression of neovascularization achievable? *J Pediatr*. 1996;129:618

Motor Vehicles for Teenagers

To the Editor.—

Most parents have concerns for the safety of their teenage children as they approach the age of 16 years and the prospect of driving a car. Several factors play a role in the risk of death and injury from vehicle crashes for teen drivers, including the experience, maturity, and ability of the driver, as well as the safety of the vehicle itself. As a society, we try to assure safety with laws and rules that govern driver education, testing, licensing, alcohol and drug use, curfews, and seatbelt use. As parents, we try to support these rules and reinforce responsible behavior behind the wheel. One other area in which we, as parents, have an important role is in the choice of the vehicle which our teens drive. A survey by Rivara et al¹ showed that more than 30% of parents indicated that the family would buy an additional vehicle for their teenagers to drive. I would like to relate my experience with three teen drivers (my children) and an approach which influenced their buying a safer car.

After beginning to drive, each of my children became interested in having a car of his/her own, and each had worked to save money to be able to buy a used car. Each began with aspirations of buying a small sports car or a small, open-air, sport utility vehicle, almost all of which are less safe than larger sedans,^{2,3} which my teenagers would not consider for purchase. I offered to assist in buying a vehicle for each of my children, if they would choose safer ones. Economic incentives and data from the Insurance Institute for Highway Safety (IIHS) offered a mechanism for me to guide my teenage children toward cars which may be safer.

IIHS has published driver death rates for many makes and models of recent vehicles.⁴ A score is calculated based on the actual death rate of drivers per 10 000 registered vehicles for more than 140 different vehicles of recent model years, usually 3 to 7 years old. A score of 100 is assigned for the average driver death rate; 200 is twice the average, 50 is half the average, etc. Our family agreement was that our teen would contribute the percentage of the price of the vehicle, which was equal to the IIHS score for that vehicle (ie, the lower the score, the lower the percentage the teen would have to contribute). From that point forward, none of my children even considered buying vehicles with scores approaching 100 or more. After considerable study, one of my children discovered that a previous IIHS report had found that the Volvo 240 series (1990-1992) had a score of 0. That is, for a full year, there were no driver deaths reported for these vehicle model years⁵; this meant that he would have to pay nothing for the car. So that he would be making some contribution to the purchase, we agreed to use a more recent issue of the IIHS driver death rate comparisons, in which the Volvo received a score of 10, meaning that he would pay 10%, and I would pay the rest. The result of this program is that each of my three children has eventually come to the same conclusion, and each now is the proud owner of a Volvo 240, and there has been no complaining.

There is no way to determine which vehicle is truly the “safest,”⁵ and driver death rates are a reflection of some combination of vehicle factors and the type of person who drives such vehicle. Nevertheless, it is probably a reasonable approximation for the crashworthiness of the vehicle. Other measures of vehicle safety, which should be used to choose a safer vehicle, include size, crash test results, and presence of other safety features, such as airbags.

Many parents cannot afford to contribute to the purchase of a vehicle for their teenager. However, among the 30+% who may purchase one,¹ a program to link the amount of parental contribution to the safety of the vehicle may have merit in guiding teens toward safer vehicle. It certainly had that effect in our family.

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REFERENCES

1. Rivara FP, Rivara MB, Bartol K. Dad, may I have the keys? Factors influencing which vehicles teenagers drive. *Pediatrics*. 1998;102(5). URL:

<http://www.pediatrics.org/cgi/content/full/102/5/357>

2. Evans L, Frick MC. Mass ratio and relative driver fatality risk in two-vehicle crashes. *Accid Anal Prev*. 1993;25:213–224
3. Evans L, Frick MC. Car size or mass: which has greater influence on fatality risk? *Am J Public Health* 1992;82:1105–1112
4. Insurance Institute for Highway Safety. Driver death rates by make and series, 1991–1995 models. September 1997. Internet site: www.hwysafety.org
5. Insurance Institute for Highway Safety. Special issue: driver death rates by vehicle make and series. *Status Report*. 1994;29(11). October 8, 1994
6. Insurance Institute for Highway Safety. Vehicle by vehicle death rate comparisons; Volvo 240 and Saab 9000 rate best among 178. *Status Report*. 1995;30(9). October 14, 1995

HIGH-TECH STEALTH BEING USED TO SWAY DOCTOR PRESCRIPTIONS

Prescriber profiles are the centerpiece of an increasingly vigorous—and apparently successful—effort by drug makers to sway doctors' prescribing habits. To create them, pharmaceutical marketers are buying information from pharmacies, the federal government, and the American Medical Association, which generates \$20 million in annual income by selling biographies of every American doctor . . . Of the \$13.9 billion that the drug companies spent promoting their products last year, 87%, or about \$12 billion, was aimed at doctors and the small group of nurse practitioners and physicians' assistants who can prescribe some medications, about 1 million prescribers all told.

Stolberg SG, Gerth J. *New York Times*. November 16, 2000

Noted by JFL, MD

Motor Vehicles for Teenagers

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