

We will try to publish authors' responses in the same edition with readers' comments. Time constraints might prevent this in some cases. The problem is compounded in a bimonthly journal where continuity of comment and redress are difficult to achieve. When the redress appears 2 months after the comment, 4 months will have passed since the original article was published. Therefore, we would suggest to our readers that their correspondence about published papers be submitted as soon as possible after the article appears.

### Care of the Premature Infant

*To the Editor:* Dresden's review article, "A Family Medicine Approach to the Premature Infant,"<sup>1</sup> is a very helpful guide for family physicians caring for premature infants. Family physicians in their communities need to be skilled in extending this care to the best of their abilities. The care of a small premature infant adds stress to intact families, and often these infants are born to dysfunctional families.

To help support the family and aid the at-risk infant in achieving his or her optimal development, the federal government passed Public Law 99-457 in 1986. This amendment to the Federal Education to the Handicapped Act<sup>2</sup> was not mentioned in the review article and is important to understand when providing comprehensive care to premature infants. The law provides for "statewide, comprehensive, coordinated multidisciplinary, interagency programs of early intervention services for all handicapped children and their families." The intention is to promote the infant's development in the areas of physical skills, cognitive skills, speech and language, and psychosocial skills by early intervention and stimulation.

Each state has adopted its own approach to providing these services. The programs are sometimes called early-stimulation programs or birth-to-3 programs. The services are to be made available to all developmentally at-risk premature infants and their families. Ideally such assistance should enhance the infant's development and potential and thus decrease later costs to the public schools, which must provide special education programs. The services are generally administered by the local board of education but multiple agencies are involved. Knowledge of this law, its mandate, and how it is administered in the community is important for family physicians who care for handicapped or potentially handicapped children.

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### Anesthesia for Neonatal Circumcision

*To the Editor:* While Lenhart and colleagues should be lauded for acknowledging the pain inflicted by neonatal circumcision and for their attempts to reduce this pain, several aspects of their publication reflect wishful thinking rather than medical fact.<sup>1</sup>

Although circumcision is a popular, income-producing procedure in the United States, the 1989 American Academy of Pediatrics position on circumcision cannot be construed as an endorsement of circumcision. Unfortunately, the committee's recommendations reflected the strong pro-circumcision bias of its chairman rather than the medical literature available at the time. Since then, most articles published in the medical literature have seriously undermined the mythical medical benefits of neonatal circumcision.<sup>2,3</sup> These studies have prompted international pediatric societies to oppose routine neonatal circumcision.<sup>4,5</sup> Unfortunately, the United States has such a strong bias towards routine male infant circumcision that it is unlikely that any amount of data will dissuade us from our current practice.

The strongest example of the authors' wishful thinking is the repetitive use of the term *eliminate* to describe the effect of local anesthetic on the pain of neonatal circumcision. To date not a single study has shown that local anesthetic, either applied topically, injected locally, or injected as a nerve block, has eliminated the pain of neonatal circumcision. It has been clearly shown that neonatal circumcision "may induce long-lasting changes in infant pain behaviour because of alterations in the infant's central neural processing of painful stimuli" regardless of whether anesthetic is used.<sup>6</sup>

Stress response in neonates is not confined to one physiologic system, so to study the pain of neonatal circumcision properly, an investigator must document, in addition to behavioral changes, the electrophysiologic measurements of cardiac activity to assess reactivity and regulation of the autonomic nervous system and the cortisol levels to assess the hypothalamic-pituitary-adrenocortical response.<sup>7</sup> While crying might be decreased with dorsal penile nerve block, there is still a significant rise in cortisol levels from baseline resulting from the surgery.<sup>8</sup> Given that no previous investigators have shown local anesthetic eliminates the pain of neonatal circumcision and that the present study did not fully assess these neonates, the use of the term *eliminate* is unfounded and misleads the reader into believing that the pain of neonatal circumcision can be eliminated when it cannot.

Finally, the distal branch block arm of the study was closed because 2 of the 11 had marginal cosmetic out-

comes. What is the acceptable cosmetic standard? Is there an objective medical standard? In a prospective study of 100 circumcised infants, 50 percent had part or all of their glans covered by skin following the operation.<sup>9</sup> Did one-half of these circumcised boys have marginal cosmetic outcomes? Are the authors applying a standard that does not exist? Clearly the circumcised penis is commonplace in the United States, but implying a degree of normality to the finished product is unfounded.<sup>10</sup>

We fully support the efforts of Dr. Lenhart and his co-authors to relieve the pain of neonatal circumcision, but the scientific data are not strong enough to support this procedure even if anesthetic is used.

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#### References

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8. Stang IJ, Gunnar MR, Snellman L, Condon LM, Kestenbaum R. Local anesthesia for neonatal circumcision. Effects on distress and cortisol response. *JAMA* 1988;259:1507-11.
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The above letter was referred to the author of the article in question, who offers the following reply.

*To the Editor:* The feedback from Drs. Cold, Van Howe, and Storms is appreciated. Like it or not, however, neonatal circumcision remains the most commonly performed surgical procedure in this country. Indeed, that the American Academy of Pediatrics Task Force 1989 opinion on circumcision has been construed as endorsement for circumcision contributes to the likelihood that neonatal circumcision will not be abandoned in this country. Certainly the reports in the medical literature documenting medical benefit have contributed to this opinion as well.

It is essential that if circumcision is to be performed, it must be done as humanely as possible. Because the techniques used to perform local anesthesia vary so widely, not only in their efficacy but in their safety, it is important to establish which technique most safely and reliably reduces the pain. Pain cannot be eliminated from any surgical procedure, but it can be substantially reduced; and when properly applied and administered, local anesthesia dramatically alters the physiologic and behavioral responses of the infant compared with those of the nonanesthetized neonate.

I am in agreement with Drs. Cold, Storms, and Van Howe. Neither can our study nor can any other study show that pain is eliminated; nevertheless, what has been documented in many studies—including ours—is that the pain of circumcision can be markedly reduced, if not in some instances nearly eliminated. Local anesthesia can thereby contribute to the humane performance of circumcision.

The distal branch block arm of the study was dropped for two reasons: safety and cosmetic outcome. First, the edema created by distal injection made visualizing the penile landmarks and performing the procedure much more complicated, therefore impairing safety. Second, it is my experience that parents are not happy when the appearance of the completed circumcision does not meet their expectations. Certainly there is no standard for cosmesis as it relates to circumcision; however, a parent's expectation is a standard that must be met.

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