

infants receive as a result of variability in transfusion practices in nurseries. There appears to be no rationale for the provision of specialized blood products in centers where transfusion-acquired CMV infection does not appear to be a significant problem. Although packed RBCs are the only known infectious blood products for neonates, platelet units that are even more heavily contaminated with white cells have been shown to be a significant source of CMV infection in bone marrow transplant recipients.<sup>3</sup> It would seem reasonable to extrapolate that unselected platelet units may also transmit CMV infection to premature neonates. In fact, in a recent study from Houston,<sup>4</sup> four of the six infected infants received platelets or plasma from CMV-positive donors. It is possible that these infants acquired CMV from blood products other than the saline-washed red cells they received. I do not think it is reasonable to continue to provide unselected platelet units in centers where seronegative RBCs or frozen deglycerolized cells are provided to premature newborn infants. A clearer understanding of the pathogenesis of transfusion-acquired CMV infection, particularly with respect to donor and/or host factors that promote reactivation of latent virus from blood products, is required. This would allow us to explain the observed geographically disparate results in the incidence of transfusion-acquired CMV infection in premature neonates and to adopt a more rational approach to the prevention of this complication of blood transfusion.

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#### Limitations of paternity testing calculations revisited

##### To the Editor:

Silver and Schoppmann<sup>1</sup> point out that not all men for whom the evidence strongly favors paternity are, in fact, fathers. Inevitably, thus, some men will be assigned incorrectly to be fathers by a legal system that relies (even to a modest degree) on genetic evidence. This is incontrovertible. I take issue, however, with their conclusion that this represents "a limitation of paternity testing calculations." After all, a paternity probability of, say, 98 percent *should* mean that one in 50 men with such evidence is a nonfather; the probability is a statement of both the strengths and the limitations of the evidence. To blame the limited nature of the evidence on the probability that properly expresses that limitation is much the same as to punish the messenger for bringing unwelcome news.

Lentz and Polesky<sup>2</sup> concur that some courts that, by statute, rely strongly on the opinion of experts when reaching a decision of paternity may "deny persons their right of due process." No objection is made to the presumptive denial of due process when many courts rule by statute or precedent that, when experts offer an opinion of nonpaternity, the issue is settled.<sup>3</sup> Perhaps they agree with Silver and Schoppmann that such evidence for nonpaternity is typically so strong that due process is not (or should not be) an issue. I point out that, in practice, the reliability of evidence presented in favor of paternity is not all that different from the reliability of exclusion reports and, in any case, decisions in favor of paternity are not rendered on the basis of expert testimony alone.

In California, there is a presumption of paternity (rebuttable by the preponderance of evidence) when the paternity index is 100 or greater. In practice, this threshold is usually significantly overshot, and the mean prior probability of paternity (here as elsewhere) is 75 to 80 percent, so that there is expected to be only one nonfather among 1000 men with evidence strong enough to establish the presumption. Silver and Schoppmann<sup>4</sup> criticize the California system because the practice would "create a prejudicial situation that would make rebuttal difficult." Just so! By what form of logic should it be easy to convince a rational and objective judge or jury that any given tested man is the one exception in 1000? If it were easy, then dozens or even hundreds of the 999 fathers would escape their responsibilities—in effect returning us to the time before genetic evidence could be introduced to establish paternity.

The rate at which routine opinions of nonpaternity are in error seems to me also to be about one in 1000. Admittedly, this is a subjective opinion, but I would be surprised if many of my colleagues would take strong issue. Of course, even when an unopposed opinion of nonpaternity is considered conclusive, a different opinion by another expert negates the presumption. A liberal policy, as exists in many jurisdictions, of permitting and even encouraging a second opinion permits our legal system to accommodate such an error rate. Similarly, the fact that not all men with paternity indices of 100 or more are fathers is adequately addressed by a policy, such as we have in California, that encourages repeat and additional testing. Indeed, exclusion by repeat or additional testing is usually the only rational way of overcoming the nonconclusive presumption of paternity; whatever the flaws of our paternity legislation, at least it encourages rational behavior.

The slow but sure legislative process to which my colleagues object will lead ultimately to the transformation of the legal determination of paternity (that is, after all, usually a purely biologic issue) into the legal acknowledgment of the scientific determination of paternity. The California courts and legislature regard this as progress.

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