

## Thiopental Anesthesia for Cesarean Section: A Rebuttal

*To the Editor:*— Marx and Costin<sup>1</sup> consider thiopental anesthesia for cesarean section “. . . acceptable in 1974, but . . . no longer appropriate in 1982 when mother and father, obstetrician and perinatologist demand newborn conditions that facilitate parent-infant interaction.” Alas, such interaction is only feasible with regional anesthesia, hypnosis, or acupuncture. We offer a thiopental-succinylcholine-oxygen sequence as one more option to those available when general anesthesia is preferred or indicated. The multiplicity of agents already proposed for this use underscores the lack of a true “anesthetic of choice” and the need for a safe alternative.

A strictly controlled thiopental-succinylcholine-oxygen regimen, the total barbiturate dosage remaining below 7 mg/kg, does provide such an alternative.<sup>2,3</sup> Based on pharmacokinetic principles, it relies for analgesia and amnesia upon the initial transient high levels of thiopental in the mother's brain. Subsequent drug redistribution, with rapid decline in maternal blood barbiturate levels, uterine contractions, cord compression, nonhomogeneity of blood in the intervillous space, hepatic extraction, and progressive dilution and shunting in the fetal circulation are all factors that combine to protect the fetal brain and myocardium from the depressant effects of thiopental so administered to the mother,<sup>4</sup> as evidenced by favorable Apgar scores and acid-base status in the newborn.<sup>2,5</sup>

Persistence of subthreshold levels of thiopental in the newborn for hours or even days seems innocuous. Agreed, neonatal neurobehavioral scores following general anesthesia, whether induced with thiopental or ketamine, are unquestionably inferior to those after spinal anesthesia.<sup>6</sup> Between the two general anesthetic combinations, however, the choice is not at all clear. Neurobehavioral scores after thiopental *do not differ significantly* from those following ketamine.<sup>6</sup> (Indeed, on day 2, the all-important tone and sucking responses are identical.<sup>6</sup>) Furthermore, this comparison includes, with both anesthetic regimens, the administration of nitrous oxide, which, unlike thiopental (or ketamine), does accumulate in the fetus, reaching equilibrium with the mother in 15 min.<sup>7</sup> Unfortunately, neonatal neurobehavioral scores following thiopental-oxygen anesthesia (*i.e.*, without nitrous oxide) are not available for definitive evaluation.

Marx and Mateo have stated<sup>8</sup> that “Since the shunts across the maternal pulmonary circulation and across the placenta are large yet unpredictable, and since we

found no deterioration in the foetal or neonatal well-being with increases in maternal oxygen tension, we believe that an inspired oxygen concentration of close to 100 per cent is optimal for caesarean section provided that pain and awareness by the parturient woman can be avoided.”

Thiopental-succinylcholine-oxygen anesthesia meets these stipulations.

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