

second paragraph; there is evidence in the literature¹ that one *can* extrapolate oxytocic effects on the pregnant uterus from the second trimester to the uterus in labor. In fact, the full-term uterus is more sensitive to those effects, and therefore doses of ketamine that are used to produce anesthesia in other circumstances may be dangerous to the fetus if used before delivery. Finally, in answer to their first sentence, the word "ideal," as an adjective, is defined as "conforming to an ultimate form of perfection or excellence"² or again "considered the best of its kind."² My statement only said that "ketamine is less than an ideal anesthetic"; surely Drs. Hodgkinson and Marx are not suggesting that keta-

mine is the ultimate, perfect anesthetic for delivery?²

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REFERENCES

1. Caldeyro-Bacia R, Poseiro JJ: Oxytocin and contractility of the pregnant human uterus. *Ann NY Acad Sci* 75:813-830, 1958-59
2. American Heritage Dictionary of the English Language, Edited by Morris W. New York: American Heritage Publishing Co., 1969; p 653

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Mutagenicity of Fluroxene

To the Editor:—We wish to alert anesthetists to the finding that fluroxene is mutagenic in the Ames *Salmonella*/microsome assay system. This test is both sensitive and specific in the detection of carcinogens as mutagens, with approximately 90 per cent of carcinogens tested being mutagenic and almost all mutagens tested being carcinogenic.¹ Halothane was not mutagenic in this system.² We have also tested enflurane, isoflurane, and methoxyflurane, and they are not mutagenic (unpublished data).

Although fluroxene is no longer in production, some institutions may have accumulated stores of this agent, so that it may still be in clinical use. It is unlikely that fluroxene will be further tested for carcinogenic potential. Our findings suggest that fluroxene poses a possible health hazard both as a mutagen and as a suspect carcinogen. Although the experimental data have not yet been published, we feel that anesthetists should be aware of these facts if they are considering using fluroxene in the clinical setting.

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REFERENCES

1. Ames BN, McCann J, Yamasaki E: Method for detecting carcinogens and mutagens with the *Salmonella*/mammalian-microsome mutagenicity test. *Mutation Res* 31:347-364, 1975
2. Baden JM, Brinkenhoff M, Wharton RS, et al: Mutagenicity of volatile anesthetics: Halothane. *ANESTHESIOLOGY* 45:311-318, 1976