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In Reply:—We thank Prof. Bromage for his comments on our recent publication.[1] His suggestion that rotation of the liver, as caused by hyperlordosis, can lead to inferior vena cava (IVC) obstruction is a possibility, with the most probable site being just before entry into or in the lower part of the hepatic IVC sulcus. We agree with his view that epidural analgesia should be interrupted periodically to allow assessment of spinal cord function.

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Nonanesthetic Haloalkanes and Nicotinic Acetylcholine Receptor Desensitization Kinetics

To the Editor:—Raines reports the effect of volatile anesthetics (enflurane and isoflurane) and 'nonanesthetics' (2,3-dichlorooctafluorobutane and 1,2-dichlorohexafluorocyclobutane) on the desensitization kinetics of the Torpedo nicotinic acetylcholine receptor (nAChR).[1] The less pronounced effect of nonanesthetics on the desensitization kinetics of this membrane protein is interpreted as evidence that the system is a valid model of the volatile anesthetic site of action, based on a somewhat contentious criterion suggested by Eger and colleagues.[2–4] Indeed, these nonanesthetics were described recently as inducing at least one component of the anesthetic state.[5]

The nonanesthetics studied were chosen, in part, because they lack a bromine atom that may quench fluorescence. However, halogenated molecules that contain chlorine atoms also may quench fluorescence,[6] in some cases with an efficiency (the probability that an encounter between quencher and fluorophore will result in energy transfer) that exceeds that of brominated compounds. Therefore, using quenching of indole fluorescence in methanol (as a model for tryptophan residues in proteins), 1,2-dichlorohexafluorocyclobutane is found to be a superior quencher compared with halothane, whereas 2,3-dichlorooctafluorobutane is 84% as efficient as halothane (fig. 1). The effective fluorescence quenching exhibited by these bichlorinated compounds is presumably due to the electron withdrawing influence of the neighboring fluorines, which results in favorable conditions for electron transfer to the chlorine atoms. The lack of a bromine atom, therefore, is not a valid reason to exclude direct fluorescence quenching by the test compound.

An alternative interpretation of the results reported by Raines[1] is that quenching of a portion of the native nAChR tryptophan fluores-