In Reply:—My deceased organic chemistry professor, who long
ago awarded this undeserving pre-medical student a high grade, must
be spinning in his grave. Desflurane and isoflurane, though closely
related, are most assuredly not isomers. They are analogs (a chemical
compound structurally similar to another but differing often by a
single element of the same valence and group of the periodic table
as the element it replaces.1) I am beholden to the many individuals
who kindly and gleefully telephoned, faxed, E-mailed, Internetted,
and wrote and even more thankful than previously to earn my daily
bread practicing anesthesiology rather than chemistry.

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What’s That Platelet Count?: A Case of Pseudothrombocytopenia
in an Obstetric Patient

To the Editor:—I would like to report a case of pseudothrombo-
cytopenia or spuriously low platelet count that may have erro-
noeously prevented regional anesthesia in an ASA physical status I
patient. A 34-year-old healthy gravida I para 0 parurient presented in
active labor and requested epidural anesthesia. She had an uncom-
plicated pregnancy and was receiving no medications other than pre-
natal vitamins. Routine laboratory data were obtained. Her initial
platelet count was 69,000/mm³. A repeat platelet count on the same
sample revealed a platelet count of 67,000/mm³. The attending
anesthesiologist thoroughly discussed this with both the patient and
the obstetrician. Her history was negative for easy bruising or hem-
orrhage. Additional laboratory data revealed normal prothrombin time
and fibrinogen level. Fibrin split products were not increased. Lumbar
epidural anesthesia was initiated without difficulty. One hour later, a
separate blood specimen was drawn in a citrate containing vacu-
tainer, which revealed a platelet count of 120,000/mm³

Anesthesiologists should be aware of spuriously low platelet counts
due to the phenomenon of ethylenediaminetetraacetic acid (EDTA)-
induced platelet clumping. When routine blood samples are collected
and placed in an EDTA solution, as is customarily, platelet clumping
can occur. Automated cell counters consequently will underestimate
the number of platelets present in the specimen.3 After reviewing this
case with a pathologist and viewing a peripheral smear of this
patient’s blood, multiple clumps of platelets could be seen attached
to neutrophils. The mechanism of EDTA-induced platelet clumping
seems to be a reaction of platelet-specific antibodies with platelets
in the presence of EDTA.3

Anesthesiologists should be aware of this artifact so that diagnostic
and therapeutic errors would not occur as one may erroneously with-
hold regional anesthesia in such individuals. It has been reported

that patients whose platelets were normal in function but whose
laboratory tests spuriously indicated thrombocytopenia have been
treated inappropriately with corticosteroids and diagnosed erro-
noeously with idiopathic thrombocytopenic purpura.4

In conclusion, when a low platelet count is unaccompanied by
signs or symptoms of bleeding or disseminated intravascular con-
gulation, pseudothrombocytopenia should be suspected. Anesthe-
siologists then can review these cases with pathologists, send a second
specimen in a sodium citrate anticoagulated sample tube, and proceed
with regional anesthesia with a clear conscience.

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(Accepted for publication October 18, 1993.)