Correspondence

Pulmonary Edema during Anesthesia

To the Editor—We agree that several factors may have been responsible for the "pulmonary edema" that Stoelting 1 observed in his "healthy young" patient under anesthesia. Recently we encountered a case bearing similarities and illustrating another possible cause.

An otherwise healthy young woman, with no history of cardiopulmonary disease, was admitted to the hospital with moderate vaginal bleeding, orthostatic faintness, tachycardia, and low-grade fever resulting from incomplete abortion. Concerned about the possibility of the patient’s self-instrumentation, the gynecologist was eager to perform a D & E promptly and brought the patient to the operating suite, starting a unit of whole blood en route. Although the lungs were clear to auscultation on admission and the patient seemed quite comfortable supine, without cyanosis, dyspnea, or confusion, the anesthesiologist heard scattered rales bilaterally. The chest x-ray revealed perihilar infiltrates with neither cardiomegaly nor pulmonary vascular engorgement. The radiologist suggested that the patient was having a mild allergic reaction to the blood.

Ward 2 described a similar case, in which a young man who had suffered acute gastrointestinal bleeding developed the same radiologic features during transfusion, while still hypovolemic and in no respiratory distress. The infiltrates disappeared in several days without specific therapy and were accompanied by "only an occasional scattered rale," moderate eosinophilia, fever (the reason for obtaining the x-ray), and urticaria. Ward notes that a similar syndrome has been found following other sensitizing agents associated with the broad category of pulmonary infiltration with eosinophilia (PIE syndrome). 3 The list includes drugs (barbiturates, many antibiotics), infectious diseases (tuberculosis, many parasitic infestations), collagen diseases, asthma, and malignancies.

Several aspects of Stoelting’s case suggest a pulmonary hypersensitivity reaction: bilateral infiltrates (clearing over several days) without pulmonary vascular engorgement or change in heart size (admittedly, a non-standard, anteroposterior portable examination), normal CVP while supine, absence of respiratory distress, prompt awakening from anesthesia, and an apparently uneventful immediate postoperative course. We postulate that the stimulus was the transfused blood, but cannot exclude another antigen released during the operation or an unmentioned drug, such as an antibiotic, administered at the request of the surgeon. Helpful information might include a more complete history of drugs given, allergy, transfusion, and obstetric background, as well as mention of whether and for how long eosinophilia and/or fever persisted.

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REFERENCES

To the Editor—The pulmonary hypersensitivity reaction was not considered a possible cause of pulmonary edema in our patient. I agree that there are similarities between our patient and the patients described by Drs. Orkin and Hudson. To answer the questions raised and to point out some differences, the following should be mentioned: our patient had a negative allergic history, had never received blood, was typed as PO CO AbO, and was taking no medications preoperatively.