Editorial Comment

Good Work Establishes the Need for More Research

One of the tenets of research is that the factors under study, as well as their clinical and statistical variability, should be reduced as much as possible so that the result of interest will be isolated. Having achieved that, one has created an opportunity to establish a cause/effect relationship. However, chance still may play a role in the results. An unforeseen bias may lead to an incorrect interpretation of the data. In addition, fraud—although unlikely—must still be ruled out.

Barutca et al of the Adnan Menderes University in Turkey did a fine job of removing possible confounding factors from their study published in this issue. For example, aside from their primary diagnosis of cancer, these patients had few comorbidities. Importantly, they were free of hypertension and the use of antihypertensive drugs. Because of the common occurrence of hypotension with amifostine, having to adjust the medications could easily have caused problems. None of the patients had renal dysfunction or other important co-existing problems, which could have made interpretation of the results much more difficult. Finally, patients received only cisplatin as the primary treatment for their cancer (with other adjuvant medications, based on their type of cancer) instead of receiving a wide number of drugs with differing and confusing adverse effects.

The investigators used the highest dose of amifostine recommended, based on a milligram-per-meter-squared basis. In some ways, this could have caused confounding, but using a higher dose stressed the population and made the point of interest quite clear.

Because of the care taken by Barutca et al to avoid variability in these factors, we can be reasonably certain that, in this small group of Turkish patients—and probably others—age, in and of itself, was not a factor in hypotension related to amifostine.

All good research leads to the need for further study. First, a larger, more disparate population (in terms of comorbidities) should now be studied. Then, the investigators could modernize treatment with amifostine by trying a shorter time of infusion (10–15 seconds instead of 30 minutes) and a different route of administration (SC vs IV). Finally, a more sophisticated assessment of renal function and its change should be carried out.

Michael Weintraub, MD
Editor-in-Chief