Chemical Peritonitis After Intraperitoneal Sodium Thiosulfate

KEY WORDS: Sodium thiosulfate; peritonitis; particulate matter; FDA approval.

Editor:

Gupta and colleagues described a patient with end-stage renal disease and calcific uremic arteriopathy who developed peritonitis after intraperitoneal administration of sodium thiosulfate (1). Because peritoneal fluid and blood cultures showed no bacterial growth, a diagnosis of chemical peritonitis secondary to sodium thiosulfate was suggested. An alternative explanation that may be considered is peritonitis secondary to particulate matter contamination. The introduction of particulate matter into the peritoneum during peritoneal dialysis has been associated with the development of diffuse peritonitis with granuloma formation (2).

The US Food and Drug Administration (FDA) approved Sodium Thiosulfate Injection from Hope Pharmaceuticals for the treatment of cyanide poisoning in February 2012. When the patient in the foregoing case report was treated in 2009, the only sodium thiosulfate products available in the United States were marketed by other companies that lacked FDA approval. The FDA has warned that drugs marketed without regulatory approval cannot be assumed to be safe (3,4).

Several injectable drugs marketed without FDA approval, including sodium thiosulfate, have been recalled from the market recently because of particulate matter contamination (5). It is possible that product with particulate matter contamination was inadvertently administered before it was recalled.

The cause of the peritonitis experienced by the patient in the Gupta case report remains uncertain; however, to avoid unnecessary risks, it is clear that critically ill patients should receive only high-quality medications. When selecting products from various manufacturers, physicians should consider quality and choose an FDA-approved product whenever one is available.

DISCLOSURES

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REFERENCES

1. Gupta DR, Sangha H, Khanna R. Chemical peritonitis after intraperitoneal sodium thiosulfate. *Perit Dial Int* 2012; 32:220–2.
2. Lasker N, Burke JF Jr, Patchefsky A, Haughey E. Peritoneal reactions to particulate matter in peritoneal dialysis solutions. *Trans Am Soc Artif Intern Organs* 1975; 21:342–5.
3. United States, Department of Health and Human Services, Food and Drug Administration (FDA). Unapproved Drugs: Drugs Marketed in the United States That Do Not Have Required FDA Approval (Web page). Silver Spring, MD: FDA; 2012. [Available at: http://www.fda.gov/Drugs/GuidanceComplianceRegulatoryInformation/EnforcementActivitiesbyFDA/SelectedEnforcementActionsonUnapprovedDrugs/default.htm; accessed 15 December 2012]
4. United States, Department of Health and Human Services, Food and Drug Administration (FDA). Sodium nitrite injection and sodium thiosulfate injection drug products labeled for the treatment of cyanide poisoning: enforcement action dates. *Federal Register* 2012; 77:71006–71008.
5. United States, Department of Health and Human Services, Food and Drug Administration (FDA). American Regent Initiates Nationwide Voluntary Recall of Sodium Thiosulfate Injection, USP 10% (100 mg/mL) 10 mL Single Dose Vials Lot# 0056 Due to Translucent Visible Particles (Web page). Silver Spring, MD: FDA; 2012. [Available at: http://www.fda.gov/Safety/Recalls/ucm242195.htm; accessed 17 December 2012]

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