

Minimizing vincristine misadministration

Dear Editor:

We read with interest the article "Inadvertent intrathecal administration of vincristine" (*Community Oncology*, January 2007). This topic is of great concern to all institutions prescribing, compounding, dispensing, or administering vincristine and intrathecal chemotherapies. We would like to suggest additional methods to minimize the potential for vincristine misadministration and clarify vincristine labeling guidelines.

Vincristine dilution is recommended by both The Institute for Safe Medication Practices (ISMP) and the Joint Commission on Accreditation of Healthcare Organizations (JCAHO).^{1,2} These organizations recommend diluting vincristine in a minibag instead of preparing undiluted vincristine in a syringe for intravenous (IV) push administration. The volume, minibag, tubing, and warning labels on the container and overwrap are visual deterrents to intrathecal administration. Proper precautions must be taken to prevent or reduce the risk of extravasation when administering vincristine by peripheral IV infusion.

Table 1 lists recommendations described by the ISMP and the JCAHO for vincristine error reduction. The reader is referred to the JCAHO for additional intrathecal administration guidelines.

In addition, we suggest the use of pharmacy computer programs to

assist with error reduction efforts. These programs generate warning messages if any route other than IV is entered in the computer at the time of order entry.

Finally, patients and families are extremely important partners in helping to reduce errors associated with chemotherapy.³ Patients and their families should be educated about chemotherapy regimens and encouraged to question unusual dosage forms and routes of administration.

The United States Pharmacopeia (USP) and the US Food and Drug Administration (FDA) mandated manufacturer and pharmacy vincristine warning label requirements in 1991 to reduce accidental intrathecal administration of vincristine.¹ Therefore, the warning labels are a requirement and should not be considered a recommendation.

Institutions should devise vincristine and intrathecal policies and procedures using risk-reduction strategies described by the ISMP and the JCAHO. Such policies will help protect the patients from vincristine misadministration at each step of the drug-delivery process.

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TABLE 1

Strategies for vincristine error reduction^{3,4}

- Vincristine dilution (eg, minibag administration)
- Special packaging (eg, overwrap)
- Warning labels (FDA and USP requirement)
- Pharmacist double-check of vincristine preparations
- Independent double-check prior to administration ("time-out")
- Banning of vincristine from lumbar puncture procedure rooms
- Banning of vincristine and intrathecal agent administration in the same location
- Dispensing of vincristine (or intrathecal drugs) only after verification that other agent(s) have already been given
- Bedside monitoring for vincristine extravasation and IV patency
- Education of all healthcare staff about fatality risk with intrathecal administration of vincristine

Adapted from American Society of Health-System Pharmacists³

References

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3. ASHP guidelines on preventing medication errors with antineoplastic agents. *Am J Health-Syst Pharm* 2002;59:1648-1668.
4. Institute for Safe Medication Practices. IV vincristine survey shows safety improvements needed. Available at: <http://www.ismp.org/Newsletters/acutecare/articles/20060223.asp>. Accessed April 23, 2007.