Medication Safety Alerts

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This column draws on US and Canadian experience and includes, with permission, material from the *ISMP Medication Safety Alert!*, a biweekly bulletin published by the Institute for Safe Medication Practices (ISMP), Huntingdon Valley, Pennsylvania.

NEWS

On May 30, 2000, the National Aeronautics and Space Administration (NASA) and the Department of Veterans Affairs (VA) in the United States signed an agreement committing the 2 agencies to create a voluntary patient-safety reporting system for VA health-care facilities. The voluntary reporting system is based on the Aviation Safety Reporting System developed for the Federal Aviation Administration and operated by NASA. ISMP Canada is currently reviewing the merits of the Aviation Safety Reporting System, and comparing the system with the one currently in use by ISMP (in the United States and Canada). ISMP Canada promotes voluntary medication error reporting systems, which focus on learning from direct reporting by practitioners. We encourage practitioners to report to ISMP Canada interesting medication-related events and any experiences in dealing with actual or potential errors. Such reports and comments can be made online through the ISMP Canada Web site (www.ismp-canada.org). Reports can be submitted anonymously, but provision of the reporter's identity gives ISMP Canada the opportunity to clarify and request additional information if necessary. Please be assured that the reporter's identity and the location of events will be held in strict confidence.

A number of hospitals in the Greater Toronto Area have established multidisciplinary safe medication practice committees or working groups, which are under the auspices of either the pharmacy and therapeutics committee or the hospital's quality and risk management committee. These hospitals include the University Health Network, Sunnybrook and Women's College Health Science Centre, The Scarborough Hospital, the William Osler Health Care Corporation, and the Centre for Addiction and Mental Health. The mandate and terms of reference for these committees focus on prevention and the development of strategies to reduce medication errors. Although other health-care professionals have a major role to play and a strong contribution to make to these important committees, pharmacists have taken the lead in orchestrating their establishment. ISMP Canada is committed to supporting this patient safety initiative and will facilitate network communication among these groups and others who are planning similar ventures. Hospitals that have established similar committees are encouraged to contact David U (davidu@ismp-canada.org) to share strategies and related information.

AUTOMATIC STOP-ORDER POLICIES: A TIME FOR REVIEW

Although automatic stop-order policies help to safeguard patients against unnecessary and prolonged administration of medications, they can inadvertently add to the risk of drug-related problems. This is becoming more apparent as hospitals implement electronic systems with computerized medication administration

records. Stop-dated drugs are sometimes discontinued by the system without a review.

A report recently received by ISMP Canada describes a hospital inpatient diagnosed with ongoing chest pain. The patient was awaiting cardiac surgery, and enoxaparin 100 mg SC q12h was ordered. The hospital has a 7-day automatic stop-order policy for all heparin orders, including enoxaparin. The medication was not reordered before the stop date, and all the usual system checks failed to catch the discontinuation of enoxaparin for this patient. Some of the contributing factors mentioned in the report included lack of knowledge about the policy, nursing and pharmacy workload, and a weekend stop date. Fortunately, there were no negative outcomes for the patient, and, through follow-up checks that were in place, the medication was reordered 24 h later.

Recommendations

- Incorporate, where possible, the duration of the drug treatments when developing diagnosis-specific treatment protocols or preprinted treatment orders.
- Provide ongoing education to physicians to remind them of the value of specifying the duration and intent of medication orders *at the time of writing the order*. This can obviate the need for an automatic stop order.
- Examine processes in place for notification about automatic stop orders, the timing of the notification, and the process for review.
- Educate patients about their medications and the review processes. Empower them to ask questions when a medication is suddenly stopped. Empower them to request information.
- Consider the possibility of giving pharmacists hospital-endorsed authority to extend or remove automatic stop dates for specified indications. Documentation of such interventions in the patient's health record would also provide ongoing education.

COMMUNICATION BETWEEN HOSPITALS ABOUT PATIENTS BEING TRANSFERRED

A 15-year-old female patient was transferred from one hospital to another. The accompanying document listed current medications, including the antiepileptic drugs divalproex sodium and lamotrigine 75 mg bid. During the initial interview with the patient, it became apparent that she was not aware that she was taking lamotrigine. Further inquiry to the originating hospital revealed that the accompanying "current medication" document listed lamotrigine because the computer system had a record that the drug had been started in 1998. Further consultation with the pharmacy of the originating hospital confirmed that lamotrigine had not been ordered or given during her most recent admission.

This situation is of particular concern because lamotrigine needs to be started gradually. Too-rapid a dose escalation can lead to a potentially fatal skin reaction. Also, divalproex inhibits the metabolism of lamotrigine, so when the two drugs are used concomitantly, lamotrigine must be started at 25 mg every other day. Had the recipient hospital started the patient at 75 mg PO bid, the patient would have been at serious risk.

Safe medication practices include confirmation of the status of high-alert medications when patients are being transferred. In this case the hospital to which the patient was transferred went to great lengths to find out exactly what the patient had been taking during her stay at the other hospital. When generating up-to-date medication data from the computer system, practitioners should take extra care to retrieve data for current medications only. Last but not least, educating patients about their current medications, through discharge and transfer counselling, will empower them to ask questions. In this case, the patient's knowledge helped to prevent a potentially serious drug-related problem.

SPECIAL FEATURE

The special feature presented here is taken directly from *ISMP Medication Safety Alert!* volume 5, issue 7, April 5, 2000.

Pain, Paralysis, and Knowledge of Impending Death Mark Intrathecal Vincristine

Problem: We received a newspaper report last week about a former police chief with Burkitt's lymphoma who received vincristine (Oncovin and others) intrathecally instead of methotrexate. As a result, he suffered paralysis, agonizing pain, and awareness of his own impending death, which occurred on Christmas day, 10 weeks after a neurologist administered the drug. The vincristine was intended for IV use. The potential for this tragic mix-up is well known. Warnings appear in the product labeling, drug monographs, and numerous articles in this newsletter and professional journals. Why

do such needless tragedies continue to happen when they are so readily preventable?

While we have no specific information other than news reports about the above-cited error, most often, errors result when medication syringes are mixed up during the injection process. USP requires specific cautionary labeling when dispensing vincristine. A label that states, "FATAL IF GIVEN INTRATHECALLY. FOR IV USE ONLY. DO NOT REMOVE COVERING UNTIL MOMENT OF INJECTION," *must* be applied to all syringes by dispensers. Each syringe *must* be placed into an overwrap which also *must* have this labeling. However, some may not be aware of the labeling standard or may not know that each drug carton contains the cautionary labels and overwrap. These may be missed if staff is not specifically looking for them. Even if vincristine is properly labeled and packaged, clinical personnel may dangerously remove the drug from its overwrap in advance of IV injection. If vincristine is near an intrathecal medication during the drug administration process, the physician, focused on performing a lumbar puncture, maintaining sterility, and preventing patient movement, may overlook the syringe label and accidentally pick up the intrathecal medication. A neurologist, who may not be familiar with cancer drugs or protocols, may administer the drug. If both syringes are present, the neurologist may erroneously believe that each is to be given intrathecally.

Safe Practice Recommendation: ISMP and FDA will be increasing efforts to alert the healthcare industry about this problem and suggest solutions. We both urge you to take the following steps today to prevent accidental intrathecal administration of IV medications:

- Never dispense an IV medication in a way that allows its entry into the physical location where an intrathecal medication is being administered. Consider administering intrathecal medications in a designated location (e.g., a treatment room) at a standard time (e.g., early morning or late evening). The pharmacy can prepare intrathecal medications immediately before they are needed and deliver the drugs to a specific location that is different from the delivery time and location of the patient's remaining therapy.
- The list of intrathecal drugs that are administered for any disease is very small. Cytarabine, methotrexate, thiotepa, gentamicin, vancomycin, and hydrocortisone are among those used for cancer patients. Establish a list of drugs that can be administered intrathecally (or epidurally) and ban all other injectable drugs from rooms where lumbar punctures are performed.
- Require at least two health professionals to independently verify and document the accuracy of all intrathecal doses before administration. In some cases, a family member might help in the checking process.
- Wrap intrathecal drugs within a sterile bag which is then wrapped again in a sterile towel or another bag labeled for intrathecal use. Do not unwrap the package until immediately prior to injection.
- Accrediting and regulatory bodies should provide oversight to assure that facilities where chemotherapy is given have policies and procedures in place that are being followed to prevent accidental intrathecal injection of IV drugs.

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