NSW HEALTH

Safety Alert 04/06

AUGUST 2006

Distributed to:

- Chief Executives
- Directors of Clinical Governance
- Directors of Clinical Operations

Action required by:

- Directors of Clinical Governance
- Directors of Clinical Operations

For response by:

- Directors of Clinical Governance

We recommend you also inform:

- Drug and Therapeutics Committees
- Area Directors of Nursing
- Area Directors of Pharmacy
- Directors of Cancer Services
- Pharmacists
- Nurses
- Medical staff

Deadline for completion of seven actions

28 September 2006

Quality and Safety Branch
NSW Department of Health

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Safe Use of Vincristine

Vincristine is an intravenous chemotherapy drug

Vincristine, a medicine commonly used in the treatment of leukaemias and lymphomas, is neurotoxic and must only be administered intravenously.

Background

Vincristine must not be administered intrathecally.

Sentinel events associated with the inadvertent intrathecal administration of vincristine have been reported in Australia and overseas. This error results in a fatal outcome in 85% of cases with devastating neurological effects in the few survivors.

Recently in NSW a near miss involving an intravenous chemotherapy agent was reported. The drug was almost injected intrathecally but implementation of local policy averted this error.

Implementing the actions in this Safety Alert will reduce the risk of inappropriate intrathecal injections.

ACTIONS REQUIRED BY AREA HEALTH SERVICES

These actions focus on improving the safety of vincristine administration directly and indirectly by promoting safe systems for management of intrathecal medicines.

1. Vincristine should be administered in a minibag, not a syringe. Use of a minibag aims to 'design out the error' by preventing connection to a spinal needle.

For adults - administer vincristine diluted to 50ml in a minibag over 5-10 minutes.

For children - administer vincristine diluted to 20-50ml in a minibag over 5-10 minutes.

For children younger than 10 years of age, where an individual risk assessment has determined use of a minibag to be inappropriate, administration in a syringe in a minimum volume of 10ml may be considered (*).

The recommended diluent is sodium chloride 0.9%. After administration, the line should be flushed with an appropriate volume to ensure no medicine remains.

(*) Note that inadvertent intrathecal administration of vincristine has occurred despite dilution to 10ml and 20ml in syringes.

CAUTION - Despite dilution vincristine remains a vesicant and extravasation should be avoided. Policies ensuring safe administration techniques and stringent monitoring must be followed to avoid extravasation whenever vincristine is administered.

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ACTIONS REQUIRED BY AREA HEALTH SERVICES (continued from page 1)

2. All vincristine products, including outer wraps, should be labelled with a prominent warning label stating: "FOR INTRAVENOUS USE ONLY – Fatal if given by other routes". Negative labels, such as "Not for intrathecal use" should NEVER be used.

3. The timing and location of vincristine preparation, delivery and administration should be such that it is separate from all medicines intended for intrathecal administration.

4. Vincristine, and other intravenous medicines, must be packaged, transported and stored in specifically designated containers. Separate packaging and different containers must be used for medicines to be administered intrathecally.

5. All medicines for intrathecal administration should be labelled with a prominent warning label, on the syringe and the outer wrap, stating "For intrathecal use".

6. Only staff specifically trained and experienced in cancer treatments should be designated to prescribe, prepare, dispense, deliver, receive or administer injectable chemotherapy. This includes registrars, consultants, pharmacists and nurses.

7. Staff administering intrathecal medicines must use formal checking procedures involving at least two health professionals, including an oncology trained nurse or pharmacist and a medical officer. These checking procedures should include:

- A 'time out' immediately prior to administration;
- Verification of patient identifiers, drug, dose, volume, route and rate against the medication order;
- A check for any warning statements on the label of the medication that warn against intrathecal administration eg "FOR INTRAVENOUS USE ONLY – Fatal if given by other routes";
- Signature of the administration record by both health professionals.

ACTIVITIES TO SUPPORT IMPLEMENTATION OF ACTIONS BY AREA HEALTH SERVICES

- **Local policies and procedures** are to be developed reflecting national recommendations and incorporating local requirements.
- Prepare and administer intravenous vincristine in **minibags.**
- Identify barriers for compliance with the use of minibags.
- Ensure that practices are in place that **separate** the prescription, preparation, dispensing, supply, receipt, storage and administration of intravenous vincristine and medicines to be administered intrathecally.
- Implement procedures for formal checking of intrathecal administration of chemotherapy involving two health care professionals.
- Ensure appropriate orientation, education, training, assessment and designation of all staff involved with chemotherapy is maintained. Maintain a register of staff designated to prescribe, prepare/dispense, supply, receive or administer chemotherapy.
- All staff should be made aware through training, and via documentation in policies and procedures, of the catastrophic outcomes associated with the administration of vincristine via the intrathecal route. Access to information on treatment options is to be available at the point of care to facilitate rapid treatment in the event of error.
- Ensure that labelling of vincristine products is appropriate and prominent warnings are in place and that specific information including patient identifiers, drug, dose, volume, route and date are clear on all products.
- Ensure that processes are in place to avoid common location storage of intravenous chemotherapy and intrathecal medicines in pharmacy, wards and treatment areas.

The information in this Safety Alert is based on the Australian Council for Safety and Quality in Health Care vincristine Medication Alert, December 2005 at http://www.health.gov.au/internet/safety/publishing.nsf/Content/vincristine