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Mary Pack Arthritis Program

METHOTREXATE CLINICAL PRACTICE GUIDELINES FOR STAFF

TITLE: Handling of premixed injectable Methotrexate (MTX) by employees who are pregnant, breast-feeding or attempting to reproduce

Date: July 1997 **Reviewed:** January 2009

PURPOSE:

To outline policy, guidelines and procedures that protect nurses, physicians and caregivers from health risks associated with preparation, administration and disposal of MTX.

POLICY:

1. Employees who are pregnant, breast-feeding or trying to reproduce will follow procedures for safe handling standards for cytotoxic agents as outlined in Cytotoxic Standards (2008).

2. It is the responsibility of the employees handling MTX to discuss with their department supervisor any desired change in work assignment as a result of pregnancy, breast feeding or trying to reproduce.

RATIONALE:

An extensive review of the scientific literature indicates that MTX has the potential to be teratogenic. In view of this evidence, MTX is not given to women who are pregnant, breast feeding or attempting to reproduce and those receiving MTX are counselled to avoid conception.

Reports have been published about the reproductive risks associated with occupational handling of cytotoxic drugs. Results to date have been inconclusive. However, due to the teratogenic potential of MTX, recommendations exist encouraging all caregivers who are pregnant, breastfeeding or trying to reproduce to comply with recommended safe handling standards for cytotoxic agents.

RECOMMENDATIONS:

1. Employees will be informed of the potential reproductive hazard associated with preparing and administering injectable, premixed MTX.

2. Employees will use the Cytotoxic Standards (2008); Clinical Practice Guidelines and references to enable them to make informed decisions regarding handling of MTX. The references will be updated annually and/or revised as new evidence and expert opinion

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METHOTREXATE CLINICAL PRACTICE GUIDELINES

TITLE: Accidental Contact with Premixed Injectable Methotrexate (MTX)

Date: July 1997 **Reviewed:** January 2009

POLICY:

To provide guidelines for the treatment of health care providers who sustain accidental contact with MTX. See Cytotoxic Standards (2008) pg. 24.

PRODCEDURE:

1. The health care provider will take the following measure immediately following accidental contact with MTX. Inform your doctor or local hospital.

   Clothing – change clothes immediately and avoid touching the soiled area. Wash separately from other clothing in hot water.

   Eye Contact[1] **–** flush the affected eye(s) with large amounts of clean water or normal saline for a minimum of 15 minutes. Inform your doctor or local hospital.

   Skin Contact – remove any contaminated clothing immediately. Wash the area with soap and running water for a minimum of 15 minutes. Do not scrub as unbroken skin provides protection.

   Skin Puncture – wash the site with soap and running water for at least 15 minutes. Allow wound to bleed freely.

2. Report any accidental contact or skin puncture to immediate supervisor. Phone '84' to be seen by the First Aid attendant or go to the Emergency Department for assessment.

   If exposure to blood and body fluids occurs, follow BBF Protocol (revised March 18, 2004) and complete Management of Percutaneous and Permucosal Exposure to Blood and Body Fluid/Laboratory Requisition (HLTH 2339).

3. Complete Employee Incident/Accident Report Form (Form A-94) upon return to department. Fax the top copy to 604 875-5461.

[1] Eye wash bottle and solution available in treatment room. Eyewash station located in Room 225.

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METHOTREXATE CLINICAL PRACTICE GUIDELINES

TITLE: Handling of Premixed, Injectable Methotrexate MTX

DATE: July 1997 **Reviewed**: January 2009

POLICY:

The Mary Pack Arthritis Program is committed to:

- promoting safe handling practices of employees when receiving, preparing, administering, transporting and/or disposing of material waste.

- ensuring information and training in safe handling practices are available to employees and clients.

RATIONALE:

MTX is classified as a cytotoxic drug. The potential hazards of cytotoxic drug exposure have been cited in a number of industry references. These hazards are related to the mixing of the drug, the dose of the drug and the duration and frequency of caregiver exposure.

Current industry standards and guidelines on the handling of cytotoxic agents are based on what is known about these drugs, what is not known and what is suspected, based on their use in cancer chemotherapy. Industry guidelines specific to the handling of premixed injectable MTX do not exist. The extent of occupational exposure during routine administration of premixed, injectable MTX in the treatment of rheumatic disease has not been established.

MTX has been approved for use in the treatment of rheumatoid arthritis for over 20 years. At the low doses, administered MTX acts as an anti-inflammatory agent with subtle immunomodulating properties. Documented evidence and expert opinion among rheumatologists, citing long term use of MTX at therapeutic doses, indicates no evidence of increased cancer risk in rheumatic disease populations.

However, expert opinion, scientific evidence and the current practice of informed consent supports the potential teratogenic risk of MTX. Therefore, employees are to follow recommended safe handling practices for cytotoxic agents.

PROCEDURE:

Exposure to premixed, injectable Methotrexate can occur by:

- Injection (needle stick injury)
- Breathing in aerosols
- Contact with eyes, mouth, nose, skin
- Accidental ingestion

Safe handling practices include preparing, transporting, administering, and/or disposing of material wastes. Therefore, the following procedures will be followed.

1. Preparation – MTX will be prepared in Pharmacy in single dose pre-loaded syringe/needle units and packaged into labelled (1), zip lock plastic bags.

2. Transport – MTX will be transported from Pharmacy to Mary Pack Arthritis Centre in labelled, zip lock plastic bags in a labelled puncture proof container.

3. Administration and disposal

    a) Employees will wear long sleeved lab coats or gowns and disposable gloves when administering MTX.
    b) Employees will administer MTX in single dose pre-filled syringe/needle units and immediately dispose of the syringe, needle and cap into a labelled sharps container.
    c) Employees will not prime the needle unless there is air in the syringe. If there is air in the syringe it will be expelled before the cap is removed from the needle or alternately the air will be expelled into a sterile cotton ball or gauze 2 x 2.

4. MTX spill – Employees will use Chemotherapy Spill Kit stored in clean utility room and follow procedure outlined in Cytotoxic Standards (2008) – pg. 20. If the spill is large then Code Brown is initiated by calling Mike Prokop at 604-875-5037.

5. Accidental Exposure – Employees will follow the appropriate contact procedures of eye or skin contact; or skin punctures as outlined in Cytotoxic Standards (2008) – pg 24 and the Methotrexate Clinical Practice Guidelines.

(1) green cytotoxic sticker

DEFINITIONS:

aerosols – liquid droplets or solid particles dispersed in air that remains for a long period of time.

cytotoxic agent – a substance that is potentially genotoxic, oncogenic, mutagenic, teratogenic or in any way hazardous to cells.

exposure/contact - direct contact with a cytotoxic agent in any form via skin contact, inhalation, injection (ie needle stick) or ingestion.

handling – any activity involved during the transportation, preparation, administration, storage, waste and disposal or clean-up of a cytotoxic agent.

teratogenic – ability to cause birth defects in a developing fetus.

wastes – unused drug; equipment and materials used during the preparation administration or handling.

(1) Gloves will be disposed of in labelled, white containers. Soiled lab coats will be removed, bagged and immediately laundered on site. Unsoiled lab coats will be laundered on site each week.