DukeMedicine

Division of Cellular Therapy

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Etoposide Administration

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ABMT-GEN-028
ETOPOSIDE ADMINISTRATION

1 PURPOSE

1.1 To outline nursing responsibilities with high dose etoposide administration.

2 INTRODUCTION

2.1 Care of the patient receiving chemotherapy medication in highly specialized and requires consistency in practice. This protocol is to ensure the safe administration of this antineoplastic agent. High dose etoposide (VP-16) may be given as part of the preparative regimen for blood and marrow transplantation in order to eradicate unwanted cell populations.

2.2 This drug is classified as a plant alkaloid. Induces irreversible blockade of cells in premitotic phases of cell cycle. It interferes with topoisomerase II enzyme reaction. The highest concentration of the drug is found in the liver, spleen, kidneys, and central nervous system. A limited amount of the drug is metabolized in the liver. Biliary excretion of unchanged etoposide and/or its metabolites is an important route of elimination. Only 8% or less of an intravenous dose is excreted in the urine as metabolites.

3 SCOPE AND RESPONSIBILITIES

3.1 Physicians and nurses responsible for the care of the blood and marrow transplant patient.

4 DEFINITIONS/ACRONYMS

4.1 VePesid®- Etoposide

4.2 Toposar®- Etoposide

4.3 VP-16- Etoposide

5 MATERIALS

5.1 Personal Protective Equipment

6 EQUIPMENT

6.1 N/A

7 SAFETY

7.1 Verify that informed consent has been obtained.

7.2 Complete ABMT Unit Chemotherapy Checklist.

7.3 Dose is calculated based on 40% adjusted ideal body weight.

8 PROCEDURE

8.1 Discuss possible side effects and symptom management strategies with patient.

8.2 Hydration

8.2.1 Confirm IV hydration is infusing at prescribed rate.

8.2.1.1 Expect order for 250ml/hour for 4 hours prior to etoposide infusion.

8.2.1.2 Vigorous hydration is continued for ≥ 8 hours after completion of chemotherapy.

8.3 Verify drug dose calculations and patient identity with second RN prior to each dose as per DUH Chemotherapy Administration Protocol.

8.4 Verify patency of IV site.

8.4.1 Central line access is recommended.

8.4.2 Assess line for blood return.

8.4.3 Use an IV infusion pump to regulate etopside infusion rate.

8.5 Chemotherapy should come from pharmacy primed and attached to low sorbing DEHP-free tubing with a .22 micron filter.

8.6 Premedicate with antiemetics as ordered.

8.7 Chemoprotective gloves and a chemoprotective gown must be worn when administrating etoposide. For additional information, refer to the DUH chemotherapy Safe Handling and Spill Management of Chemotherapeutic and Biologic Agents Process Standard.

8.8 Emergency equipment must be available in the event the patient develops allergic reaction, anaphylaxis, or bronchospasm during infusion.

8.9 Monitoring

8.9.1 Obtain baseline vital signs.

8.9.2 Monitor and document VS q 15 minutes during infusion; if MAP remains ≥ 60, continue VS q 15 minutes until end of infusion. After infusion completed monitor and document VS q 15 minutes x 2, then q 30 minutes x 2, then q 1 hour x 4.

8.9.3 If MAP < 60 during or post infusion, notify the covering physician and change VS to q 5 minutes until MAP ≥ 60 x 3. Then return to q 15 minutes VS. When MAP ≥ 60 without intervention change VS to q 30 minutes x 2, then q 1 hour x 2.

8.10 If patient becomes hypotensive, notify Provider and start Normal Saline (NS) bolus.

8.10.1 Anticipate order for 1-2 L normal saline (NS) bolus.

8.10.2 If hypotension persists despite fluid resuscitation, anticipate order for dopamine or phenylephrine infusion.

8.11 If the patient develops rigors or fever, notify physician.

8.11.1 PO acetaminophen may be ordered.

8.11.2 Meperidine 12.5mg IV may be ordered.

8.11.3 Blood cultures are not routinely ordered for fevers which occur in association with etopsoide administration.

8.12 Probable side effects

8.12.1 Myelosuppression

8.12.2 Hypotension (MAP < 60mmHg)

8.12.2.1 Avoid administration of diuretics for 24 hours prior to etoposide administration to minimize risk of hypotension.

8.12.3 Alopecia

8.12.4 Dermatitis, skin changes to palms, soles, elbows

8.12.5 Rigors

8.12.6 Fever

8.12.7 Mucositis

8.13 Possible side effects

8.13.1 Nausea, vomiting

8.13.2 Diarrhea

8.13.3 Anorexia

8.13.4 Headache

8.13.5 Metabolic acidosis

8.13.6 Increase in LFTs

9 RELATED DOCUMENTS/FORMS

9.1 Document the following:

9.1.1 Patency of IV site/blood return from catheter.

9.1.2 Patient's tolerance of etopside.

9.1.3 Response to interventions to minimize side effects.

9.1.4 Patient's understanding of expected side effects and symptom management strategies.

9.2 Reportable Conditions

9.2.1 Hypotension (MAP < 60 mmHg)

9.2.2 Respiratory distress

9.2.3 Rigors, fever > 38.0° C

9.2.4 Nausea and vomiting unrelieved by antiemetics

10 REFERENCES

10.1 Clinical Pharmacology. Available via Clinical and Medical Reference Program.

10.2 Polovich M, Whitford JM, Olson M, Editors. Chemotherapy and Biotherapy Guidelines and Recommendations for Practice. 3rd Edition © Oncology Nursing Society, Pittsburgh, PA 2009.

10.3 Lexicomp Online. Available via Clinical and Medical Reference Program.

11 REVISION HISTORY

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02	J. Loftis	Section 8.6- removed pre-medications, Section 8.11.2- corrected spelling.

Signature Manifest

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ABMT-GEN-028 Eotopside Administration

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