1.0 Policy statement

Patients admitted on hydroxyurea shall not be given hydroxyurea prescription on discharge. **Haematology is to prescribe in order to monitor blood work.**

2.0 Definitions

- **Hydroxyurea (HU)** is a chemotherapy medicine that has been used to treat many disorders, including sickle cell disease (SCD). Research has shown that patients with sickle cell disease who take hydroxyurea are admitted to hospital because of painful events only half as often as patients who do not take hydroxyurea, have fewer acute chest crises and have less need for blood transfusions if they are admitted to hospital. Please see [www.aboutkidshealth.ca](http://www.aboutkidshealth.ca).

- **Maximum Therapeutic Dose (MTD)** is maximum dose or clinical efficacy achieved.

- **Transcranial Doppler (TCD)** is a non-invasive ultrasound used to screen for strokes measuring the rate of blood flow through the large vessels on both sides of the brain.

- **Vaso-Occlusive Crises (VOC)** are blockages of the blood vessels anywhere in the body by deformed red blood cells. This causes a lack of oxygen in the affected area of the body. Symptoms depend on where the blood vessels are blocked.
### 3.0 Guideline

**Sickle Cell Disease: Guidelines to Hydroxyurea**

#### Prior to starting hydroxyurea

- Ensure that the patient has a thorough history and physical including height, weight, blood pressure, and hemoglobin levels.
- Discuss the potential benefits and risks of hydroxyurea with the patient and their family.
- Consider the patient’s sleep apnea status.
- Review the patient’s history of hematologic toxicities and beneficial effects.

#### Prior to initiating hydroxyurea

- Discuss alternative therapies if any are available.
- Review the patient’s family history of sickle cell disease.
- Obtain informed consent from the patient and their caregiver.

#### Prior to initiating hydroxyurea

- Review the patient’s medical history, including previous hospitalizations and transfusions.
- Review the patient’s laboratory results, including hemoglobin levels and hematocrit.
- Review the patient’s risk factors for hematologic toxicities.

#### Hematologic Toxicities

- Consider dose escalation if the patient experiences hematologic toxicities.
- Consider dose reduction if the patient experiences hematologic toxicities.

#### Monitoring

- Regularly monitor the patient’s hemoglobin levels and hematocrit.
- Monitor for side effects, including nausea, vomiting, and diarrhea.
- Monitor for hematologic toxicities, including aplastic anemia and pancytopenia.

#### Ongoing Monitoring

- Review the patient’s response to hydroxyurea at regular intervals.
- Adjust the dose as necessary based on the patient’s response.

#### Conclusion

- Continue with the same dose for non-compliance.
- Discontinue hydroxyurea if the patient experiences significant hematologic toxicities.

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4.0 Related Documents

Dissolve and Dose Drug Administration ==> Chemotherapy At Home: Safely Handling and Giving Medicines
Chemotherapy At Home: Safely Giving Your Child Capsules
Hydroxyurea Education and Discussions Tip Sheet

5.0 References


7. The effect of prolonged administration of Hydroxyurea on morbidity and mortality in adult patients with sickle cell syndromes: results of a 17-year, single center trial (LaSHS). Blood 2010;115(12):2354-2363


9. Ware, RE. How I use hydroxyurea to treat sickle cell disease. Blood 1 July 2010.Vol 115, Number 26

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Attachments:

Hydroxyurea Education and Discussions Tip Sheet.pdf

Revision History.docx

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