INTRAPARTUM CARE

CORD BLOOD SCREENING PROGRAM FOR SICKLE CELL DISEASE

Keywords: Sickle cell disease, SCD, haemoglobinopathy, neonatal blood screening, cord blood test

AIM

- To identify neonates born at KEMH with Sickle Cell Disease so that treatment can be commenced as early in life as possible in order to optimise patient outcomes.

BACKGROUND

- Sickle Cell Disease is an autosomal recessive disorder which implies that it must be inherited through both parents who may have the disorder themselves or be carriers.
- Sickle Cell Disease occurs when abnormal genes are inherited from both parents.
- Sickle Cell trait is when a person inherits only one sickle cell gene and does not have the disease.
- Africans are the ethnic population with the highest prevalence of sickle cell disease and this is the reason why babies born to African women have been chosen as the target population for this screening program.
- NB: Sickle cell disease also occurs in other ethnic populations. See Clinical Guideline, O&M: Antenatal Care: Haemoglobinopathy Screening and Referral.

KEY POINT

1. Cord blood for Sickle cell Disease screening is collected from neonates born at KEMH to AFRICAN women with:
   - Unknown sickle cell status or
   - Sickle cell trait / sickle cell disease.

PROCEDURE

For AFRICAN WOMEN

1. Check the patient’s medical record or isoft Clinical Manager (iCM) for a haemoglobin studies report regarding sickle cell status.
2. If there are no results available, or the results state haemoglobin S (sickle cell) trait, or Haemoglobin S (sickle) disease, testing is required to exclude neonatal sickle cell disease.
3. If testing is required, collect an extra cord blood EDTA sample (minimum msample required is 0.5mL). NB: the cord EDTA sample sent to the Blood Bank cannot be used for haemoglobinopathy testing.
4. If no cord sample is available collect a peripheral blood sample (heel stab) as per Clinical Guideline, O&M, Neonatal Care: Capillary Blood Collection.
5. Label the sample with the neonate’s details.
6. Use a CPOE ‘down-time’ Pathology Request form (yellow) with the ‘Neonatal Haemoglobinopathy Screening’ sticker and tick the ‘Exclude Sickle cell Disease’ box.
7. A midwife may sign the request form.

8. The midwife shall document in the maternal notes and in the neonatal history chart MR410 that the Sickle cell Disease Screen has been collected.

9. Send the specimen to specimen collection in pathology.

10. If the haemoglobin study results indicate Sickle cell Disease, Pathwest Laboratory Medicine will directly notify the Princess Margaret Hospital Haematology Department and they will make the necessary arrangement to review the neonate. This notification will be indicated on the haemoglobin studies report.

REFERENCES / STANDARDS

| National Standards – 1- Care provided by the clinical workforce is guided by current best practice |
| Legislation - Related Policies - Other related documents – KEMH Clinical Guidelines, Obstetrics & Midwifery: |
| • Antenatal Care: Haemoglobinopathy Screening and Referral |
| • Neonatal Care: Capillary Blood Collection |

RESPONSIBILITY

| Policy Sponsor | Nursing & Midwifery Director OGCCU |
| Initial Endorsement | August 2010 |
| Last Reviewed | October 2014 |
| Last Amended | February 2015 |
| Review date | October 2017 |

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