**Model SOP**

**Standard Operating Procedure**

**Name of the facility / activity : Management of adverse donor reactions**

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| **SOP no.** | **Effective Date** | **Pages** | **Prepared by** | **Authorised by** |
| 1.6 | 27-11-2000 | 7 |  |  |
| **Version** | **Review Period** | **Date of Review** | **Reviewed by** | **Number of copies** |
| VI | 2 years | 01-01-2015 |  | 10 |
| **LOCATION** : Blood Donation Room | | | | |
| **SUBJECT** : Blood Collection | | | | |
| **Function** : Management of adverse reactions in a donor | | | | |
| **DISTRIBUTION**: Medical Officer, Phlebotomist ( Staff nurse and Lab Technician)  Master file | | | | |

1. **SCOPE & APPLICATION:**

Any adverse reaction in the immediate post-donation period requires to be attended to. To understand, prevent and manage Donor reactions is to be done by all concerned in the donor area.

1. **RESPONSIBILITY:**

The medical officer in attendance is responsible for managing the adverse reaction in the donor.

1. **MATERIALS REQUIRED :**

**Following materials are required to attend to any emergency arising in the post donation period.**

1. ***Oral medication***
   * Analgesic Tablets
   * Calcium & Vitamin C Tablets
   * Electrolyte replacement fluid (Electral)
2. ***Injection***

* Epinephrine (Adrenaline)
* Atropine Sulphate
* Pheniramine Maleate (Avil)
* Diazepam (Calmpose)
* Glucocorticosteroid (Dexamethasone)
* Glucose (Dextrose 25%)
* Furosemide (Lasix)
* Metoclopromide (Perinorm)
* Prochlorperazine Maleate (Stemetil)
* Sodium Bicarbonate
* Glucose Saline (Sodium chloride and Dextrose 500 ml.)

1. ***Antiseptics***

* Savlon
* Mercurochrome
* Tincture Benzoine
* Hydrogen peroxide

1. ***Miscellaneous***

* Bandages/Dressings
* Band-aids
* Anti Histamin (Anthisan) Cream
* Heparin and Benzyl Nicotinate (Hirudoid/Thrombophob) ointment.
* Smelling Salt-Spirit of Ammonia
* Relaxyl/Iodex/Vicks Balm
* Tongue Depressor
* Disposable Syringes and needles 22 g
* Clinical Thermometer
* Oxygen Cylinder
* Infusion Set
* Paper Bag

1. **Procedure** :

**Donor Reactions**

Even though the majority of donors experience no alteration in their sense of well being as a result of blood donation, approximately one- two percent may experience. Therefore it is important to recognize the propensity, to react and, the early symptoms, to minimize them, or to prevent them altogether.

**Contributing Factors**

1. First time donation
2. Female
3. Thin
4. Increased pulse rate
5. Low diastolic or high systolic BP
6. History of consistent previous reactions
7. Obvious nervousness or apprehension
8. Very quiet or extremely talkative.
9. Fatigue, Lack of sleep, hunger.
10. Environmental factors like noisy, crowded collection site, long waiting lines and extremes of temperature and humidity.
11. Sight of blood, another donor fainting or needle prick.

**Mild Reaction**

No loss of Consciousness

1. Pallor
2. Perspiration
3. Feeling of warmth
4. Sighing or Yawning
5. Dizziness or light headedness
6. Nausea with or without vomiting
7. hyperventilation

**Treatment**

* + - Loosen any tight clothing and ensure donor has clean airway.   
      Lower the head end.
    - Ask the donor to suck the ice or apply on forehead.
    - Keep talking to the donor, do not leave him/ her alone.
    - Make him/her lie down for slightly longer time.

**MODERATE REACTIONS**

If there is prolonged recovery or unconsciousness

1. Bradycardia
2. Shallow Respiration's
3. Hypotension
4. Unconciousness without convulsions or tetany
5. Prolonged recovery (> 15 minutes)

**Treatment**

As For Mild Reaction

**Severe Donor Reaction**

**Vasovagal Syncope**

The most frequent adverse reaction to donation, vasovagal syncope may occur in response to sudden emotional stress, pain or injury . The symptoms range from those barely perceptible, such as feeling of warmth and / or onset of perspiration, to those clearly obvious, such as convulsion and incontinence. In terms of physiological changes, it is a hypothalamic response.These effects are produced by the action of autonomic system through a venodepressor reflex, slows the heart, causes vasoconstriction and induces perspiration.

**Management of Giddiness/Syncope (vasovagal syndrome):**

* Raise feet and lower head end.
* Loosen tight clothing (belt, tie etc.)
* Ensure adequate airway.
* Check pulse and blood pressure.
* Apply cold compresses to forehead and back.
* Administer inhalation of spirit of ammonia if needed. The donor should respond by coughing which will elevate the blood pressure.
* If there is bradycardia and hypotension- Administer inj. Atropine 1 ml IM, if bradycardia continues for more than 20 minutes.
* Administer IV normal saline or dextrose saline infusions if hypotension is prolonged.

**Moderate reaction with the addition of any of the following:**

1. Rigidity or tremors of the extremities.
2. Variable colour from pale to cyanotic
3. Incontinence of urine
4. Convulsions

**Treatment**

1. Same as for moderate reaction
2. Placement of padded tongue blade may be required in mouth to prevent tongue bite.
3. If collection needle is in vein prevent flexion at the elbow and take out needle.
4. Do not give any thing by mouth.
5. If donor has not recovered spontaneously within 30 minutes saline infusion or   
   sympathomimetic agents may be required.
6. Instruct donor not to donate again.

**Nausea and vomiting**

Occur as a result of poor vein perfusion or vagal reflex.

1. Ask donor to lie in left lateral position
2. Ask donor to take deep breaths or to re-breathe in a paper bag.
3. Give donor ice to suck.
4. If donor feels vomiting give him/her emesis basis , water and paper towel to clean himself.

**Hematoma**

* Press the venipuncture site firmly with gauge
* Apply ice to the site
* Ask donor to apply thrombophobe to the hematoma, sparing the   
  venipuncture site.

In case a donor suffers any type of reaction make a note in the donor card and document it

**Precautions :** Donors should be given water and made to sit in a cool environment before blood donation’

Long waiting time should be avoided as this precipitates donor reaction

To avoid epidemic fainting give a break to blood collection or seclude the donor in case of a door reactions.

1. **REFERENCE:**
2. Technical Manual, 11th ed., American Associating of Blood Banks, 1993.
3. Technical Manual, 15th ed., American Associating of Blood Banks, 2005.
4. Donor room policies and procedures ........... AABB publication.
5. **END OF DOCUMENT**