Rapid Initial Assessment and Management of Shock

Module 4

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Rapid Initial Assessment and Management of Shock

Session Objectives:

By the end of the session participants will be able to:

- List the signs, symptoms, and causes of shock
- List the drugs and equipment that must be readily available to respond to emergencies
- Conduct a rapid assessment of a woman in shock
- Demonstrate the correct management of shock

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What Is Shock?

- Shock is a critical condition and life-threatening medical emergency.
- It is defined by the failure of the circulatory system to maintain adequate perfusion of the vital organs.
- Shock requires **immediate** treatment.

Types of Shock

Hypovolemic Shock:

- Hemorrhage (occult/overt),hyperemesis, diarrhea, diabetic acidosis, peritonitis

Septic Shock:

- Septic abortion, metritis

Cardiogenic Shock:

- Cardiomyopathies, dysrhythmias, myocardial infarction

Neurogenic Shock:

- Spinal injury, spinal anesthesia

Anaphylaxis:

- Severe allergic reactions due to food/medicines/insect bites

When to Anticipate Shock

- **Bleeding:**
  - **Early pregnancy**: ruptured ectopic, incomplete abortion, evacuation
  - **Late pregnancy**: APH, uterine rupture
  - **After childbirth**: PPH, retained placenta
- **Infections:**
  - Unsafe abortion, amnionitis, metritis
- **Trauma:**
  - Trauma to uterus or bowel during evacuation, uterine rupture

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Signs and Symptoms of Shock

- Fast weak pulse ≥ **110 beats/minute**
- BP: Systolic < 90 mm Hg
- Rapid respiration ≥ **30 breaths/minute**
- Pallor
- Sweating, cold and clammy skin
- Anxious, confused, unconscious
- Urinary output < **30 mL/hour**

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Rapid Initial Assessment

- Assess the woman rapidly to determine the degree of illness when she presents with sign and symptoms of shock

Rapid Initial Assessment (cont'd)

Ask the woman (or relative, if the woman is unconscious) if she is currently experiencing any of the following:

- Vaginal bleeding
- Respiratory difficulty
- Fever
- Severe headache/blurred vision
- Severe abdominal pain
- Severe vomiting
- Convulsions/loss of consciousness

Rapid Initial Assessment (cont'd)

What to Assess?

- Airway and breathing
- Circulation (signs of shock)
- Temperature
- Vaginal bleeding
- Consciousness

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What to Do?

Remember **ABCs of** adult resuscitation:

- **A**irway:

  Check airway. If not breathing, **clear airway, position head back to prevent tongue falling back, place airway, and remove any foreign body, if present.**

- **B**reathing:

  If no breaths or chest movements, **help her to breathe with an Ambu bag with or without oxygen.**

- **C**irculation:

  If no pulse or heartbeat, **begin cardiac massage and check response (5:1 heart compressions: respiration efforts).**

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Immediate Management of Shock

- **Shout for help;** mobilize personnel
- **Monitor vital signs**
- Position woman on her side
- Keep woman warm
- Give oxygen 6–8 liters/minute
- Elevate her legs
- Collect blood for testing Hb, blood grouping, and bedside clotting

Bedside Clotting Test

- Take 2 mL of venous blood into a small, dry, clean, plain glass test tube (approximately 10 mm x 75 mm).
- Hold the tube in a closed fist to keep it warm (±37° C).
- After four minutes, tip the tube slowly to see if a clot is forming.
- Then tip it again every minute until the blood clots and the tube can be turned upside down.
- Failure of a clot to form after seven minutes or a soft clot that breaks down easily suggests coagulopathy.

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Immediate Management of Shock (cont'd)

- Wash hands with soap and water and put on gloves.
- Clean the woman's skin with spirit at site for intravenous (IV) line.
- Insert an IV line using a 16–18 gauge needle.
- Attach Ringer's lactate or normal saline. Ensure infusion is running well.
- Give the woman fluids at **rapid rate** if she is in shock (systolic BP < 90 mm Hg; pulse > 110 beats/minute; or heavy vaginal

DO NOT GIVE FLUIDS BY MOUTH TO A WOMAN IN SHOCK.

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Immediate Management of Shock (cont'd)

- Infuse 1 L in 15–20 minutes (as rapidly as possible).
- Give at least 2 L of these fluids in the first hour (over and above fluid replacement for continuing blood loss).
- Monitor every 15 minutes for:
  - Blood pressure and pulse
  - Shortness of breath or puffiness
  - Amount of blood loss
- Reduce the infusion rate to 3 mL/minute (1 L in 6–8 hours) when pulse slows to less than 100 beats/minute and systolic blood pressure increases to 100 mm Hg or higher.

A more rapid rate of infusion is required in the management of shock resulting from bleeding.

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Immediate Management of Shock (cont'd)

- Reduce the infusion rate to 0.5 mL/minute if breathing difficulty or puffiness develops.
- Monitor urine output.
- Record time and amount of fluids given.
- Give fluids at **moderate rate** if shock is due to severe abdominal pain, obstructed labor, ectopic pregnancy, dangerous fever, or dehydration.
- Infuse 1 L in 2–3 hours.
- Give fluids at **slow rate** if the woman has severe anemia/severe pre-eclampsia, or eclampsia.

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Immediate Management of Shock (cont'd)

If IV access is not possible:

- Give oral rehydration solution (ORS) by mouth if the woman is able to drink, or by nasogastric tube.
- Quantity of ORS: 300 to 500 mL in 1 hour
- **DO NOT** give ORS to a woman who is unconscious or has convulsions.

ORS Formulation

- Take four glasses of clean (boiled) drinking water in a jug.
- Add a packet of ORS to the water.
- Stir till mixed well.
- Cover the jug with a piece of cloth.
- Give the mixture to the patient several times.
- Use mixture within 4 hours.
- If more than four hours have passed, prepare new ORS.

Determining and Managing the Cause of Shock

- Determine the cause of shock after the woman is stabilized.
- If **heavy bleeding is suspected** as the cause of shock:
  - Take steps simultaneously to stop bleeding (e.g., oxytocics, uterine massage, bimanual compression, aortic compression)
  - Use anti-shock garments if available and woman has delivered

Once the woman is stabilized, make arrangements for immediate referral.

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Determining and Managing the Cause of Shock (cont'd)

- If **infection is suspected** as the cause of shock:
  - Collect appropriate samples (blood, urine, pus) for microbial culture before starting antibiotics, if facilities available
  - Give initial dose of antibiotics
- Give ampicillin injection 2 g IV + gentamicin injection 5 mg/kg body weight IM + metronidazole injection 500 mg IV.

Once the woman is stabilized, make arrangements for immediate referral.

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Reassessment of the Woman's Condition

- Reassess the woman's response to fluids within 30 minutes to determine if her condition is improving/stabilized.
- Signs of improvement include:
  - Stabilizing pulse (rate of 90 per minute or less)
  - Increasing blood pressure (systolic 100 mm Hg or more)
  - Improving mental status (less confusion or anxiety)
  - Increasing urine output (30 mL per hour or more)

Once the woman is stabilized, make arrangements for immediate referral.

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Is Your Team Prepared for an Emergency?

Remember:

- **Everybody** on the team should be able to resuscitate when necessary.
- Have a **recognized team** that is trained to deal with emergencies.
- Roles of team members:
  - Charge person
  - Runner
  - Supplier
  - Assistant

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Team Member Responsibilities

Charge Person

- Receives patient
- Does quick assessment and decides next steps
- Stabilizes patient (start immediate resuscitation, gives directions to others)
- Stays with patient till stabilized
- Documents all findings and treatment
- Makes arrangements for immediate referral

Team Member Responsibilities (cont'd)

Runner

- Sounds alarm; calls everyone
- Bring emergency trolley/tray on site
- Assists as needed (gathers drugs, starts IV, gives emergency drugs, provides cardiac massage, etc.)
- Monitors vital signs
- Records vital signs

Team Member Responsibilities (cont'd)

Supplier

- Checks emergency drugs at the beginning of each shift
- Brings emergency tray to the site
- Brings protective wears to the site of emergency
- Brings IV stand, oxygen cylinder, etc., close to patient
- Takes samples to lab (if present)

Team Member Responsibilities (cont'd)

Assistant

- Reassures relatives/friends; escorts them away from site and keeps them informed about the woman's condition
- Controls crowd, if needed
- Assists in clean-up of the patient
- Assists in transfer of patient during referral

Implement Rapid Assessment Protocols

- **Train** all staff to react in agreed-upon manner whenever a woman with an obstetric emergency arrives at the facility.
- **Practice** emergency drills regularly with staff to ensure readiness at all levels.
- **Ensure** that the access is not blocked, equipment is in working order, and staff is well trained to receive and manage emergencies.

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Summary

- **Respond promptly to an emergency call.**
- Develop and follow protocols for managing a patient in shock.
- Teamwork is important.
- Roles and responsibilities in each shift should be well defined.
- The emergency tray should be accessible at all times.

Thanks!