

Assessment and Emergency Care of Obstetric Emergencies and Neonates

Scene Size-up

Scene Safety

Ensure scene safety and safe access to the patient. Standard precautions should be taken. If a field delivery appears imminent, gloves, gown, and eye protection are recommended. Determine the need for additional resources. Another ambulance or ALS may be needed if labor occurs, in order to continue care for the mother and newborn. Remain calm and professional.

Mechanism of Injury (MOI)/ Nature of Illness (NOI)

Assess the MOI/NOI. Observe the scene, and look for indicators that will assist you with this. The nature of the problem may not be readily apparent until more information is gathered. Avoid tunnel vision; the obstetric emergency may be related to a traumatic event. Spinal immobilization must be considered. Pay attention for signs of abuse. Abuse during pregnancy increases the chance of miscarriage, premature delivery, and low birth weight.

Primary Assessment

Form a General Impression

Your assessment of a patient with an obstetric emergency should begin at the door. Perform a rapid scan in order to ascertain if the patient is in active labor and whether delivery is imminent. Observe the scene for signs of trauma or other medical emergency. Look for signs of drug paraphernalia and for empty wine or liquor bottles that might suggest the possibility of fetal alcohol syndrome. Determine the level of consciousness using the AVPU scale. Identify and manage immediate threats to life. Determine priority of care based on the MOI/NOI. If the patient has a poor general impression, call for ALS assistance. Keep alert for signs of shock.

Airway and Breathing

Although airway problems usually are not an issue during uncomplicated childbirth, ensure the airway is open, clear, and self-maintained. Unresponsive patients will need their airway opened and maintained using a modified jaw-thrust if spinal injury is suspected or a head tilt-chin lift in nontrauma patients. A patient with an altered level of consciousness may need emergency airway management. Consider inserting a properly sized oropharyngeal or nasopharyngeal airway. Evaluate the patient's ventilatory status for rate and depth of breathing, respiratory effort, and tidal volume. Administer high-flow oxygen at 15 L/min, providing ventilatory support as needed.

Circulation

Observe skin color, temperature, and condition; look for life-threatening bleeding (including vaginal bleeding), and treat accordingly. Evaluate distal pulse rate, quality (strength), and rhythm. Tachycardia may be normal in pregnancy, but may also be an indicator of compensated shock. Treat for shock by placing the patient in a supine position, elevate the legs, maintain body temperature, and continue oxygen administration. If the patient is obviously pregnant or in the last two trimesters of her pregnancy, place her in a left lateral position to prevent supine hypotensive syndrome.

Transport Decision

If the patient has an airway or breathing problem, signs and symptoms of serious bleeding, hypertension, seizures, altered mental status, or other life threats, manage them immediately, and consider rapid transport, performing the secondary assessment en route to the hospital. Prevent supine hypotensive syndrome by transporting the pregnant patient on her left side. If the patient is immobilized, elevate the right side of the backboard. Occasionally the delivery will occur in the prehospital setting. If delivery is imminent, prepare to perform the delivery onscene.

NOTE: The order of the steps in this section differs depending on whether the patient is conscious or unconscious. The following order is for a conscious patient. For an unconscious patient, perform a primary assessment, perform a full-body scan, obtain vital signs, and obtain the past medical history from a family member, bystander, or emergency medical identification device.

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History Taking

Investigate Chief Complaint

Investigate the chief complaint to determine the patient's primary problem. Not all pregnant patients are in labor, instead there may be a medical or trauma emergency. Necessary questions may be very personal. Ensure patient privacy while remaining sensitive to the patient's feelings. Ask OPQRST and SAMPLE questions, but do not limit the history to only these. Obtaining the obstetric history should include questions about prenatal care, her expected due date, any complications she is aware of, and position of the fetus. Determine if contractions are occurring, how long they last, how far apart the contractions are, and if her amniotic sac (bag of water) has broken. If the amniotic sac has ruptured, ask about the color of the fluid; greenishbrown fluid indicates the presence of meconium. Call for ALS, and be prepared to suction prior to stimulating the newborn to breathe. SAMPLE can also be obtained from family, bystanders, and medical alert tags.

Secondary Assessment

Physical Examinations

If the patient is unconscious, perform a systematic full-body or head-to-toe examination beginning with the head, looking for DCAP-BTLS. Assessment should be rapid if the patient had a poor general impression. Obstetric patients should receive a complete assessment of major body systems. Patients in labor should be assessed for fetal movement, contractions, and possible field delivery. If you believe that delivery of the infant is imminent, check for crowning, and prepare the mother and the scene for the delivery process. Protect patient privacy at all times to the best of your ability. Assess the vaginal area only if imminent delivery is suspected or the chief complaint warrants it.

Vital Signs

Obtain baseline vital signs. Vital signs should include blood pressure by auscultation; pulse rate, quality, and rhythm; respiration rate and quality; and skin assessment for perfusion. Note patient's level of consciousness. Use pulse oximetry, if available, to assess the patient's perfusion status. Tachycardia or hypotension may indicate hemorrhage or compression of the vena cava, leading to hypoperfusion. Hypertension may indicate preeclampsia or other serious problems. If possible, compare the patient's vital signs with those of previous prenatal visits.

Reassessment

Interventions

Repeat the primary assessment and assessment of vital signs, and reassess the chief complaint. Identify any changes in the patient's condition. Vital signs should be repeated every 5 minutes if excessive blood loss is suspected to identify hypoperfusion. Place the patient in a position of comfort unless shock is suspected, then place patient supine and treat accordingly, monitoring the patient for possible supine hypotensive syndrome. If the patient is bleeding after delivery of the infant, provide uterine massage to slow it. Continue to provide high-concentration oxygen.

Communication and Documentation

Contact medical control/receiving hospital with a radio report on the patient's condition. Advise the staff if delivery is imminent or has occurred so they can be prepared for your arrival. Often you will be asked to go directly to the labor and delivery floor, bypassing the emergency department. If you are treating a pregnant patient for something other than an obstetric emergency, be sure to notify the hospital staff that your patient is pregnant and give them her due date. When completing the patient care report for a pregnant patient or for an obstetric emergency, ensure it is thorough and complete.

NOTE: Although the following steps are widely accepted, be sure to consult and follow your local protocols. Take appropriate universal precautions when treating all patients.

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Obstetric Emergencies and Neonates

General Management of Obstetric Emergencies

Managing life threats to the patient's ABCs are primary concerns with any obstetric emergency. Avoid tunnel vision. Complete a full-body scan, remaining alert for signs and symptoms of shock. Manage as per local protocol. Request additional resources if delivery is imminent or has occurred. Provide high-concentration oxygen.

NOTE: Women of childbearing age, even if they are denying pregnancy, who are complaining of abdominal pain may have a life-threatening obstetric emergency.

Labor and Delivery

Once labor has begun, there is no way it can be slowed or stopped. If you suspect that delivery is imminent (abdomen is firm, she feels need to move her bowels or need to push, or crowning is present), explain to the patient that the infant will need to be delivered outside of the hospital. Calm and reassure her, protect her privacy, and prepare for the delivery. Place the patient in a position most comfortable for her, supporting her head, neck, and back with pillows and blankets. Sterile gloves should be worn, and sterile sheets should be placed to create a delivery area. As the infant's head emerges, be prepared to suction the mouth and nose. Ensure the cord is not wrapped around the neck (nuchal cord), and guide the head downward to assist with delivery of the shoulders. Support the infant as the body is delivered, being careful because the infant is slippery. Continue to suction the infant's mouth and nose with a bulb syringe. Warm and dry the infant as you vigorously stimulate the infant to breathe. Follow your local protocol regarding clamping and cutting of the cord. At all times, someone should be monitoring the mother. Document the sex of the infant and time of delivery. Once the infant is warmed, dry, and breathing, you can place the infant on the mother's chest. Encourage the mother to allow the infant to breastfeed to assist with uterine contraction. Locate the fundus, a grapefruit-sized mass in the lower abdomen, and begin uterine massage. After the infant has been delivered, you can begin the transportation process; remain alert as you might have to assist with delivery of the placenta. At 1- and 5-minute intervals, assess and record the Apgar score.

Neonatal Assessment and Resuscitation

Following delivery, keep the infant warm and dry. Vigorously rubbing the infant's back, buttocks, and feet while drying the infant should stimulate the infant to breathe. Suction the infant's mouth first, then nose. Assess the newborn's respiratory effort and rate, as well as the heart rate. The newborn should begin breathing 15 to 30 seconds after delivery and have a heart rate of 120 beats/min or higher. If the heart rate is slow, begin by providing blow-by oxygen. If the rate does not increase, provide positive-pressure ventilation with an appropriately sized bag-mask device. A heart rate less than 60 beats/min will require you to begin chest compressions at a rate of 120 per minute with a compression to ventilation ratio of 3:1. If you suspect fetal alcohol syndrome, the newborn will probably need immediate resuscitation and transport. Do not attempt to resuscitate an obviously dead infant (one who has died in the mother's uterus before labor). An extremely foul odor, skin blisters, skin sloughing, dark discolorations, and gross deformities are indicators of fetal demise.

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Obstetric Emergencies and Neonates

Delivery Complications

Unruptured Amniotic Sac

Occasionally the amniotic sac does not rupture during contractions or at the beginning of labor. This will be noted when you assess for crowning and see what appears to be a fluid-filled sac instead of the infant's head. If the head is crowning and the amniotic sac has not ruptured, you must rupture it. You can rupture the sac by pinching it and twisting. Amniotic fluid will rush out. Ensure you have taken standard precautions. Clear the ruptured sac from the infant's face, and be prepared to suction as soon as the head delivers. If meconium is noted, provide aggressive suctioning.

Nuchal Cord

When the umbilical cord is wrapped around the infant's neck it is called a nuchal cord. If it is wound tightly it will strangle the infant, so it must be removed. Attempt to slip the cord over the infant's head or shoulder. If you are unable to slip the cord over the head or shoulder, you will need to clamp the cord in two places about 2" apart, if possible, and cut the cord between the clamps. After cutting the cord, you can unwrap it and continue with the delivery as usual.

Breech Delivery

If the buttocks present first, the infant is at great risk of trauma from the delivery. If a breech birth is suspected, the patient should be transported to the hospital if time permits. Once the buttocks have passed through the vagina, the delivery process has begun. Call for ALS support, and contact medical control. Prepare the mother for delivery by placing her in a position of comfort. The buttocks and legs should deliver spontaneously; support them as they emerge. To keep the walls of the vagina from compressing the airway, make a "V" with your gloved fingers and insert them into the vagina to create an airway for the newborn. Your fingers will remain inserted until the infant's head is delivered. If delivery of the head does not occur within a few minutes, transport the mother to the hospital, keeping your fingers inserted to maintain an airway.

Limb Presentation

If the presenting part is the infant's arm, leg, or foot, you must prepare for immediate transport. You cannot successfully deliver this infant in the field. Place the mother in a head-down, hips-elevated position, and cover the presenting limb with a sterile towel. Do not attempt to push or pull on the limb. Administer high-flow oxygen.

Prolapse of the Umbilical Cord

Presentation of the umbilical cord outside of the vagina before delivery of the infant is a very dangerous situation requiring immediate transport. Place the mother in a head-down, hips-elevated position to assist with preventing compression of the cord by the infant's head. Do not attempt to push the cord back into the vagina. Insert a sterile, gloved hand into the vagina, and gently push the infant's head away from the umbilical cord. Cover the exposed umbilical cord with a sterile, moistened towel. Administer high-flow oxygen.

Spina Bifida

Cover the exposed spinal cord with a moist, sterile dressing to prevent infection. Maintain the newborn's body temperature.

Spontaneous Abortion (Miscarriage)

If the delivery is occurring before the 20th week of gestation, be prepared to treat the patient for bleeding and shock. Place a sterile pad/dressing on the vagina. Collect any expelled tissue to take to the hospital, but never pull tissue out of the vagina. Transport immediately, continually monitoring the patient's ABCs while assessing for signs of shock.

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Obstetric Emergencies and Neonates

Delivery Complications, continued

Multiple Gestation

The procedure for delivering multiple infants is the same as that for a single newborn. If you suspect more than one infant, additional resources should be called for immediately. Record the time of birth for each infant separately, making sure to label them for identification after the delivery process is over. At 1- and 5-minute intervals, assess and record the Apgar score for each infant.

Postterm Pregnancy

Pregnancies lasting more than 42 weeks can lead to problems with the mother and infant. Infants can be larger, leading to a more difficult delivery and injury to the infant. Meconium aspiration risk increases, as does infection and stillborn birth. Respiratory and neurologic functions may be affected, so be prepared to resuscitate the infant.