



Clinical Practice Guidelines: Other/The bariatric patient

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The bariatric patient

October, 2015

Bariatric patients are increasingly entering the healthcare system; these patients require special consideration in relation to unique safety, mobilisation, transport and clinical care issues. Failure to adequately address these considerations may place the patient and paramedics at increased risk of injury and harm.

The World Health Organization (WHO) lists the extent of the obesity epidemic as one of the world's most significant health problems.^[1]

As the numbers of morbidly obese patient encounters increase, the rate of specific chronic health conditions will also increase.

Those who are morbidly obese are at a significantly higher risk for developing chronic diseases including:

- cardiovascular disease
- type II diabetes
- hypertension
- kidney stones
- stroke / transient ischaemic attack
- pulmonary disease
- osteoarthritis
- psychiatric disorders
- physical disabilities; and
- premature death.

As the individual's weight increases, the Body Mass Index (BMI) increases and the risk for comorbidities also increases.

Due to a combination of mobility issues, transportation obstacles, embarrassment or fear of being treated poorly by healthcare providers, bariatric patients will often delay seeking treatment until their illness has significantly progressed. The key to effective and safe patient handling is to realise that many patients struggling with obesity experience psychological, physiological and medical challenges.^[2]

“Obesity bias is not spoken of to the degree that other demeaning actions such as abuse, bullying, profiling, discrimination and other issues that bring intolerance to light. The reality is, however, that obesity bias is just as debasing as any other form of ostracism. Displays of bias span the range from subtle actions like eye-rolling, voice intonation, and facial movements to overt inconsideration, disrespect, and disregard. All can lead to devastating physical and psychological effects. Paramedics must anticipate and address problems that may interfere with optimal patient care, safety, and human dignity. Professionalism and compassion are always essential”^[2]

Clinical features



Bariatric patients have additional needs that require paramedics to be cognisant of challenges that accompany the care of these patients, including:

- Increased upper airway resistance, extra adipose weight on the chest, and redundant supraglottal tissue making difficult face mask ventilation even more difficult.^[2]
- Large thick tongues, short thick necks and redundant adipose tissue distorting neck anatomy.
- An enlarged heart due to the excess strain of oxygenating the body's expanse of tissues.
- Hypoventilation is a typical finding on bariatric patients caused by impaired chest expansion related to an inability for the diaphragm to fully move down during inhalation.^[2,3] These patients are relatively hypercapnoeic and may worsen with any illness or intervention which reduces respiratory ventilation functioning.
- Rapid patient oxygen desaturation is a frequent occurrence due to decreased functional residual capacity.
- Breath sounds are commonly distant or difficult to auscultate on the chest. Paramedics should listen for breath sounds on the patient's back just medial of each scapula where a lower density of adipose tissue interferes less with auscultation.
- Cyanosis is often best assessed by examining the inside of the patient's eyelid or lips.

Clinical features (cont.)

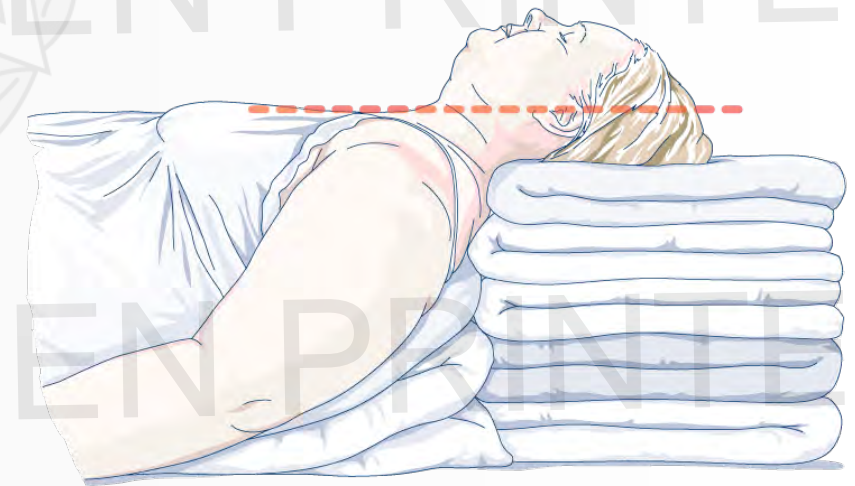


- Cannulation difficulties due to thick layers of adipose tissue obscuring deep veins from visualization and/or palpation and distortion of normal landmarks.

Risk assessment



- If appropriate, position the conscious patient to facilitate lung expansion and decrease risk of positional asphyxia. This may be required even in acute trauma as this group of patients do not tolerate supine positioning.
- Consider 'Ramping' the patient by placing several pillows or blankets under the head, shoulders (and possibly torso) to align the ear with the level of the sternal notch. 'Ramping' assists airway management by optimising upper airway patency, laryngoscopy view and mechanics of ventilation.



Ramping of patient

Risk assessment (cont.)



- Typical testing sites for blood glucose monitoring like a patient's finger may not provide enough blood due to thickened fat pads. An alternate site that may be more successful at rendering an adequate sample is an earlobe.^[2]
- Typically, pulse oximetry readings are calculated from a patient's index finger. However, if the patient has dense thick fingers light wave transmission may prevent a good wave form. An alternative may be to place the probe on the smallest available finger, lip, or earlobe.
- Bariatric patients typically have a 'difficult airway' which is defined as having difficulty with face mask ventilation of the upper airway, difficulty with tracheal intubation or both';^[3] Two person BVM techniques will commonly be required to elicit adequate airway and ventilatory control - one paramedic uses both hands to perform bilateral jaw thrust while the second paramedic ventilates the patient. Consider early use of an adjunct airway device as indicated.
- Given that venous access is difficult to obtain in the bariatric patient, paramedics should analyse the benefits of obtaining access prior to transport based on the patient's presentation and transport time to hospital and consider;
 - IV access may be easier to establish using ultrasound guidance at the receiving hospital;
 - Consider the use of intraosseous insertion; and
 - Consider alternative routes for medication administration including intramuscular (IM) and intranasal (IN) routes.
- Caution when administering pharmacology is prudent as any drug with potential cardiovascular and respiratory depressant effects must be used with caution in obese patients whose physiologic reserve is limited.

Additional information

- Most paramedics work in teams of two. It is acknowledged however that some paramedics do work as single responders but rarely can two people safely transport a patient that is morbidly obese, even if that patient can assist.
- It is crucial that paramedics are adept and adhere to proper lifting techniques, with the plan of extrication communicated and understood by all involved prior to any lifting taking place.
- The most essential element in the safe transport of a bariatric patient is communication. Early notification of the requirement for an additional resource is mandatory.
- The use of lifting aids is mandatory, however under no circumstances is lifting equipment to be used by persons who are not trained in its operation.
- It is important for all lifting efforts to include all possible means to preserve the patient's privacy, dignity, and comfort.
- Practice drills should be implemented to aid in familiarising all responders involved in the extrication prior to any lift taking place.

