Key Information

The number of obese individuals in the world population has increased dramatically over the past 20 years.

In 2013, the Centers for Disease Control and Prevention noted that one-third of all adults and 17 percent of children in the U.S. are obese.

Obesity is currently classified by severity based on increased body mass index or bodyweight.

The assessment and care of obese patients is frequently affected by attitude, lack of proper equipment, and challenges in examination.

Injuries to patients and staff can occur with moving and lifting obese patients.

In June 2013, the American Medical Association officially recognized obesity as a disease with multiple pathophysiologic aspects.

The Bariatric/Obese Patient

Purpose

Obesity has been identified as one of the world’s most significant but complex health problems today. The World Health Organization identified obesity as an escalating global epidemic that, if not checked, will significantly impact the type and kind of health care services provided worldwide. Caregivers in all emergency settings will continue to see and be challenged to provide safe and sensitive care for obese patients who are in need of emergency care. The purpose of this topic brief is to provide information about the bariatric/obese patient.

Overview

Obesity is defined as having an excessive amount of body fat and is classified by severity based on increased body mass index (BMI). BMI is a numerical value calculated using the person’s weight and height and is considered a fairly reliable indicator of body fatness and remains the standard of practice. BMI is not an ideal measure because it overestimates body fat in athletes who have a large muscle mass as well as underestimates body fat in older adults who have lost muscle mass. It is still the general standard of practice, however. The 2012 CDC obesity tables identify an obese person as having a BMI of 30 to 35 kg/m². A fifth category of obesity was recently added and is defined as a body weight of over 500 pounds with a BMI of more than 50 kg/m².

An additional evaluation of obesity can be completed by determining a waist measurement. This provides an estimation of visceral fat independent of height. Bariatric is the term used to describe the science of dealing with obese patients. The term is derived from two Greek words “baros” meaning heaviness and “triatic” meaning to provide care. While the treatment approach to obese patients may be medical or surgical, the most important approach for any obese patient is sustained weight loss.

Obese individuals are more prone to chronic disease including cardiac disease, hypertension, respiratory disease, diabetes, certain skin cancers, joint problems, and stroke. Due to large areas of skin folds, pendulant abdomens, and heavier body parts, the obese individual frequently experiences rashes, ulcers, and skin excoriations that may be prone to infections. Overall body congestion can cause fluid to leak from all body pores. Obese individuals face struggles with basic activities of daily living like walking, climbing stairs, and meeting basic needs. Depression and low self-esteem are common. The U.S. Department of Health and Human Services reports that more than 300,000 deaths are associated with overweight and obesity each year. Some estimates indicate that 89.5 million
health care days are directly related to care of obese individuals. Unfortunately, obese individuals may delay seeking emergency care, and despite looking stable at triage, they often decompensate rapidly.

Obese children also face a range of comorbidities related to weight. These range from sleep apnea to orthopedic problems. In addition, they face the social and emotional challenges of obesity as well as a shortened lifespan.

Obesity is noted to be the most common form of malnutrition in America. Food intake is high in fats and carbohydrates and low in proteins. A significant vitamin deficiency in vitamin D may be present. Deficiencies in the trace minerals contribute to the overall state of malnutrition.

Obese individuals not only face physical challenges related to size but also experience unkind treatment and lack of respect. They may feel trapped in their work and experience sadness, depression, and despair. Obese individuals have fewer job opportunities, increased economic challenges, educational barriers, and less than optimum opportunities for positive interpersonal relationships.

Surgical intervention may be selected as a treatment option for obese individuals. There are four basic types of surgery that are used:

- Roux-en-Y gastric bypass
- Adjustable gastric banding
- Vertical sleeve gastrectomy
- Biliopancreatic diversion with/without duodenal switch

Each type of surgical intervention has its advantages and disadvantages, and the bariatric surgical team considers many patient factors when considering which surgical intervention is most appropriate. Typical complications include gastric leaks, pulmonary embolism, bleeding, and obstruction, and these tend to occur in the first 30 days following surgery. After bariatric surgery, most patients achieve weight loss, and many see an improvement in comorbid conditions.

**Bariatric/Obese Patients in the Emergency Department**

The following areas of consideration are important in providing care for the obese patient in the emergency setting.

**Adopting a Model of Respect**

Evidence shows that obese patients who interact with caregivers that display negative attitudes and discriminatory behaviors are reluctant to seek care and follow medical advice. Nurses who adopt a model of respect for the person and avoid displaying inappropriate body language and making insensitive remarks and conversations provide more effective care. Emergency nurses should be advocates for the obese patients in their setting by assisting in the development of sensitive protocols of care, assessing the care environment for the correct equipment and supplies, and ensuring that care is delivered in an empathetic manner. Protocols and guidelines help ensure consistency in the delivery of care for the bariatric/obese patient and facilitates a setting of safety and dignity.
Modifying Care Delivery

The excessive amount of soft tissue in the upper airway, the large amount of body mass in the abdomen, and diminished lung capacity require modifications in oxygen supply. The nurse may need to adjust the patient’s position to assure that the head is upright and use higher than normal oxygen supply levels to provide for the respiratory care needs of the obese patient. It is likely that the patient may also suffer from obstructive sleep apnea.13

The emergency care team should understand the weight capacity of equipment used in their care setting and seek equipment resources that are size appropriate for the obese/bariatric patient. This includes items like blood pressure cuffs, wheelchairs, stretchers, scales, and patient lifting equipment. Prior to sending an obese/bariatric patient for imaging studies, the diagnostic department should be aware of the patient’s size in order to ensure the appropriate testing location and properly sized equipment are used.14–17 A transfer to another setting may be necessary if properly sized diagnostic equipment is not available at the site.

The recognition of the special needs of bariatric surgical patients is vital to provide needed emergency care. Abdominal pain with vomiting should be considered a surgical emergency, and the patient requires evaluation by the bariatric surgeon. Unstable vital signs, symptoms of sepsis with fever for 101 °F (38.3 °C), and abnormal lab values are generally considered a septic profile or gastric leak until proven otherwise. Placement of a nasogastric (NG) tube may be detrimental to the patient who has had bariatric surgery due to the anatomic changes created by the procedure. An NG tube should NOT be placed prior to checking with the bariatric surgeon. If the patient presents with bright red bleeding, emergency surgical intervention should be expected. Concurrent symptoms of tachycardia, orthostatic hypotension, a drop in hematocrit by 10 points, and a heart rate greater than 120 beats per minute for four hours or more even with a fluid bolus may also indicate a surgical emergency.18

Obesity is known to alter the pharmacokinetics and pharmacodynamics of many medications. Determining the safe dose of medications, particularly anesthetic agents, is challenging. The volume of distribution of lipophilic medications is altered, which leads to the accumulation of the medications. Lipophilic medications are dosed based on actual body weight while hydrophilic medications should usually be dosed based on ideal body weight.19 Most metabolic reactions occur in lean body mass which consist of body cell mass, extracellular water and non-fatty intercellular connective tissue. Adipose tissue does not metabolize medications.

Applying Safe Patient Handling and Mobility Standards

Nurses encounter challenges in the mobilization of bariatric/obese patients that may create unsafe conditions for both the patient and the nurse. A safe and effective patient handling and mobility program requires both planning and thought before it is actually needed. Many nursing activities that require moving, turning, or lifting obese patients or the body parts of obese patients create a situation of strain for the nurse. For example, the leg of a 350-pound patient may weigh 62 pounds. Nurses should be knowledgeable on the safe patient handling and mobility standards and verify that their lifting program includes the critical core elements needed for both personal and patient safety. The components of a bariatric handling program include:17

- Operational policy and procedure
- Patient assessment tools
- Communication tools
- Patient handling algorithms and guidelines
- Space, equipment, and environmental considerations
- Staff education program
Preparing for Care in Disasters and Public Health Emergencies

Planning for the management and care of obese patients should be part of emergency preparedness, response, and recovery. Their care needs and transport will require both extra/extended resources as well as the handling of various logistical barriers that occur during transport. Resources are available to help each setting assess their emergency plans.

Tools and Resources

BMI calculation tools are available from multiple sources. The Centers for Disease Control and Prevention (CDC) provides a simple tool that can be used to screen for weight categories in adults and children. This can be found at http://www.cdc.gov/healthyweight/assessing/bmi/

The National Initiative for Children’s Healthcare Quality (NICHQ) has a toolkit to assist clinicians in providing the appropriate care for children who are at risk for being overweight. It is located at http://www.nichq.org/childhood_obesity/childhood_obesity_toolkit.html

Teams who are interested in advocacy efforts for obese individuals can find policy assistance in the Policy Opportunities Tool provided by the Agency for Healthcare Research & Quality. The toolkit includes information on advocacy in practice, community, school, state, and federal sectors. It can be found at http://www2.aap.org/obesity/matrix_1.html

In 2012, the Committee on Accelerating Progress in Obesity Prevention Food and Nutrition Board provided both goals and strategies on how to solve the overweight of the nation. Their vision on mobilizing individuals and communities toward a society that allows everyone to have a healthy productive lifestyle are published in the Institute of Medicine’s (IOM) report on Accelerating Progress in Obesity Prevention. Injury prevention specialists have an opportunity to affect the schools and community groups in their areas.

The Rudd Center provides a toolkit to help clinicians in a variety of setting with solutions and resources to help the delivery of care for obese patients. It consists of eight individual modules on various topics. The research that supports the recommendations is also provided with the toolkit. The individual nurse can participate in a self-examination of bias related to obese patients as a part of this resource. This toolkit can be found at www.yaleruddcenter.org/resources/bias_toolkit/index.html.

Conclusion

Nurses are uniquely positioned to take a leadership role in anticipating the care needs of the obese patients in the emergency setting as well as addressing the broader needs of this vulnerable population in their communities and schools. Nurses can work collaboratively with multidisciplinary teams to foster sensitive and safe care by applying the various tools and approach to care that aim toward a healthy lifestyle.
Definitions of Terms

**Adjustable gastric banding**: A surgical procedure where a band is surgically placed over the upper portion of the stomach to create a small pouch to limit food intake. A port is placed under the skin that allows adjustments to be made to the band.

**Biliopancreatic diversion with/without duodenal switch**: A surgical procedure that limits food absorption by separating digestive enzymes from the pancreas and bile. A portion of the stomach is removed and the small intestine is divided. Part of the small intestine is attached to the stomach, carrying the food to the large intestine. The digestive juices are rerouted and meet the food in the large intestine.

**Lipophilic**: Capable of dissolving, being dissolved in, or of absorbing fats.

**Hydrophilic**: Tending to dissolve in water

**Roux-en-Y gastric bypass**: A surgical procedure in which a small stomach pouch is constructed out of the stomach and it is directly attached to the small intestine. This bypasses a large part of the stomach and duodenum and since the gastric pouch is small large amounts of food cannot be held and fat absorption is reduced.

**Vertical sleeve gastrectomy**: A surgical procedure that involves removing 90% of the stomach and creating a small pouch.

**Weight stigma**: Bias and discrimination aimed at overweight people that assumes there is something wrong and that the individual should be punished for their condition.

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References


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