Geriatrics – Assessment Challenges

Introduction

Today, people over the age of 65 represent approximately 12.6 percent of the population. This percentage is expected to rise in the next several years due to the aging "baby boomer" population. Persons 65 years of age or older are typically referred to as *elderly*. In recent years, physicians and other healthcare workers have increasingly specialized in the field of medicine dealing with elderly patients, called *geriatrics*.

Nearly 36 percent of all emergency medical calls involve the elderly. Therefore, it is increasingly important for healthcare workers to be familiar with the health-care considerations for this age group. This module lists some of the assessment differences EMTs may encounter as well as some of the challenges EMTs face when dealing with geriatric patients.

Age-Related Changes

As people age, there is a decline in the function of virtually every organ system. Some medical authorities believe that, starting at age 30, there is a 1% decrease in organ function per year. This can make it difficult to distinguish between a normal decrease in organ function due to aging and a decrease caused by an acute condition. Some of the common age-related changes are listed below:

- ☞ Total body fat decrease of 15-30 percent
- ☞ Decreased tolerance to heat and cold
- ☞ Increased risk of heart attack and stroke
- ☞ Decreased respiratory capacity and function
- ☞ Decreased kidney function
- ☞ Degeneration of the joints

These are just a few of the changes that may occur in the normal aging process. Each of these normally occurring changes can mimic the symptom(s) of an acute condition. It is important that the EMT conduct a thorough assessment geared toward the geriatric patient.

Communicating With the Geriatric Patient

Although most elderly people are healthy and are able to live on their own, you will encounter patients who have conditions that make communication difficult. Some of the problems you may encounter are:

- ☞ Poor vision due to cataracts or vision deterioration

- ☞ Shrinkage of the structures in the ear, resulting in decreased hearing and diminished sense of balance
- ☞ Ill-fitting dentures or deterioration of teeth and gums, which can cause difficulty speaking
- ☞ Significant memory loss and/or decrease in overall intelligence from Alzheimer's disease, or other conditions

When you are speaking to any patient, it is important that the patient be able to see and hear you. Make sure that you are in front of and at eye-level with the patient, since the patient's peripheral vision may be poor. Speak clearly to the patient. Remember, though, that speaking loudly is not necessarily the same as speaking clearly. Treat your patient with respect. It is a good idea to ask the patient how they would like to be addressed, and do whatever you can to put them at ease.

Assessment of the Geriatric Patient

Assessing the geriatric patient can be a challenge to even the most seasoned EMT. There can be complications that are unique to the geriatric patient. Often, the chief complaint of the geriatric patient may seem trivial or vague at first. Also, your patient may fail to tell you about important symptoms. Because of this, it is important to distinguish the patient's chief complaint from the patient's *primary problem*. The chief complaint is what the patient is most concerned about, while the primary problem is the most critical or life-threatening condition the patient is experiencing. Another difficulty is that elderly patients often suffer from more than one disease at one time. A chronic problem may make it more difficult to assess an acute problem due to a similarity of the symptoms. Also, a decreased response to pain may cause you and the patient to underestimate the severity of the problem, and the alteration of the thermal regulation system of the elderly patient may cause the patient to present with an absent or minimal fever, even in the presence of a severe infection. It is up to the EMT to ask the proper questions in order to pinpoint the primary problem that the patient is experiencing.

Your assessment of the elderly patient will be conducted in the same order as you would for any other patient. However, there are special circumstances for the elderly patient that must be noted:

Mental Status: This can be challenging because some older people have an abnormal mental status as part of their baseline condition. If family or caregivers are present, it is best to ask them what the patient's normal mental status is.

Airway: You may find it difficult to extend the head or flex the neck of an older patient due to arthritic changes in the bones of the neck. Also, loose or ill-fitting dentures may be a potential airway obstruction in an unconscious patient.

Breathing: Older patients are at higher risk for foreign body airway obstruction. This is due to the presence of large, poorly chewed food pieces and dentures. If

attempts to ventilate are unsuccessful, follow AHA guidelines and suspect a FBAO.

Circulation: The pulse of an elderly patient may be irregularly irregular (completely without any cycle or regularity). This result is very common, and not a reason of concern in itself.

Identifying Priority Patients: Older patients are less likely to exhibit severe symptoms under certain conditions therefore it can be difficult to determine a patient's priority. Keep a high index of suspicion for serious conditions in elderly patients, even if symptoms seem mild or vague.

Vital signs: Vitals in the geriatric patient will be similar to those of any other patient, for the most part. However, there are a few differences that need to be addressed.

- ☞ The *resting respiratory rate* is normally higher in the elderly.
- ☞ The *resting heart rate* is normally greater than 90 beats per minute.
- ☞ The *skin* is normally dry and less elastic.
- ☞ *Fever* is less common in the elderly, even when a serious infection is present.
- ☞ The *systolic blood pressure* will increase in the elderly patient, making systolic hypertension more common. The hypertension may give a false reading in the patient who has lost blood or who is dehydrated; however, the blood pressure will fall quickly since the patient cannot compensate well.
- ☞ The *pupils* are more sluggish to respond to light due to the normal aging process. The pupils may be distorted (not round) due to cataract surgery or other conditions. Eye drops that the patient may be taking for conditions such as glaucoma may cause the pupils to dilate and not react normally to light.

Falls

The significance of a fall for an older person should not be underestimated. Of older patients seen in an emergency department for a fall, ¼ will die within a year. Death may not be a direct result of the fall, but instead may be a result of complications from the fall. For example, while recuperating from bruised ribs sustained in a fall, a 74-year-old woman may not breathe as deeply as normal because of the pain associated with inhalation. As a result of not coughing and other changes in the lung associated with aging, if the patient comes down with pneumonia, she is more likely to die from complications of the disease.

Often, a fall is just an indication of a more serious problem. A number of older people fall because of abnormal heart rhythms. Others fall because of a stroke or internal bleeding from an ulcer. Whenever possible and when time allows, assess the patient not only for injuries that may have resulted from the fall, but also for the cause of the fall.

Geriatric Abuse and Neglect

Geriatric abuse and neglect is as big a problem in our society as child abuse and neglect. Abuse of the elderly occurs in some care centers and other institutions, but it also can -- and does -- happen at home. An elderly person is especially at risk if he is cared for by someone who is under stress from other sources. Abuse of the elderly can be physical, financial, or mental (usually involving threats or insults). Abuse often occurs when an older person is no longer able to be totally independent, or to those who are bedridden, suffering from dementia, incontinent, frail, or who have disturbed sleep patterns.

Signs of abuse can include bruises, bite marks, bleeding beneath the scalp (which could indicate hair-pulling), lacerations on the face, trauma to the ears, broken bones, deformities in the chest area, cigarette burns, and rope marks. The average abused patient is older than 80 years and has multiple medical problems such as cancer, congestive heart failure, heart disease, and incontinence.

Whenever you suspect geriatric abuse, the most important thing you can do is to obtain a complete patient and family history. DOCUMENT, DOCUMENT, and DOCUMENT! Pay particular attention to inconsistencies. *Do not confront the family.* Remember that your priority is to provide emergency care for the injuries. Any time you suspect geriatric abuse, make sure the Emergency Department is informed of your suspicions.

Summary

The EMT of today will be treating an increasing number of aged patients. It is important to remember that many changes occur - anatomical, physiological and emotional. Keep these changes in mind when treating elderly patients. Elderly patients are more susceptible to certain illnesses, medication side effects, trauma and environmental stressors. Abuse of the elderly occurs and should always be kept in mind, especially when injuries do not match the history. Any suspected abuse or neglect of an elderly patient should be reported to the emergency department.

Geriatric Falls
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In the last decade there has been a significant paradigm shift with regard to EMS responsibilities, capabilities, and the extent to which pre-hospital treatments have exponentially expanded. In part this is due to the realization that it is rare to find a provider-to-patient ratio of two to one in today's healthcare system which has been strapped and squeezed nearly beyond recognition. The healthcare system asks "why not take advantage" of this favorable provider-to-patient ratio and demand more from the EMS providers. Additionally, with the Time is Brain and Time is Heart Muscle initiatives, the EMTs are expected to diagnose accurately, and treat these time sensitive potentially catastrophic medical emergencies. It is not uncommon for paramedics to provide the entire medical therapy for STEMI patients (nitrates, beta-blockers, aspirin, plavix and heparin bolus) on the fly.

With the introduction to Advanced Medical Life Support training, the EMT is expected to be a "diagnostician", and in no situation does this become more apparent (or necessary) than in the emergency care of the geriatric patient. The geriatric patient, for a variety of reasons, is a diagnostic and therapeutic challenge—and there are plenty of them to go around. The fastest growing population subset in America is people age 85 and older. By 2030, 20% of the U.S. population will be older than 65. The elderly account for 16% of ED visits, and half of all critical care admissions. Geriatric patients can be tough to diagnose because of confounding variables such as:

- Multiple co-existing diseases (diabetes, COPD, etc)
- Altered metabolism (reduced heart, liver and kidney function)
- Multiple medications
- Hardware (pacemakers, vascular access devices, autodefibrillators, shunts, tubes, artificial heart valves and transplanted organs)
- Altered pain perception
- Altered mental status

The geriatric patient is "at risk" and susceptible to a variety of potentially lethal medical and traumatic events—such as falls. *Falls are the most common cause of injury in the elderly population.* In the community setting 30% of persons older than 65 and 56% of patients older than 90 fall each year, and the rate is much higher in nursing homes. Half of patient who fall do so repeatedly, and 5% of falls result in significant fractures. The incidence of back, neck and hip fractures increase in the 6th and 7th decades of life. Elderly patients who fall can die or become permanently disabled, and for this reason falls should not be taken lightly. Falls account for 40% of injury deaths in individuals over age 65.

Geriatric patients are prone to falls for numerous reasons. They may have poor vision, reduced proprioception, and impaired mobility. Many elderly patients require a walker, but may neglect to use this assist device when necessary, and fall as a result. Patients on antihypertensive medications may experience orthostatic symptoms and fall. Others may have cerebrovascular disease, cardiac arrhythmias, or peripheral neuropathy which predispose to a fall.

There are two broad categories of falls: **Intrinsic and Extrinsic.** Intrinsic falls are age and disease-related falls (for example due to **cardiac arrhythmia, seizure or TIA**). Extrinsic falls are mechanical falls due to environmental hazards, slippery surfaces, loose rugs and object on the floor. Distinguishing an intrinsic from and extrinsic fall is critical to the patient's treatment and well-being—and often it is *very difficult to differentiate* one from the other. The patient *may try to minimize the significance of the fall* and state "I tripped" or "I slipped" when in fact he was dizzy or orthostatic. Why is it so important to differentiate between extrinsic and intrinsic etiologies? What if the patient suffered from a transient arrhythmia (SVT, Afib, or Vfib) and fell, but the EMT and emergency physician mistakenly assumed the patient tripped or slipped? The ED assessment would be much more superficial and the patient would likely be sent back home, only to experience a second arrhythmia which could lead to serious hip fracture or death. In a hectic emergency department, of course the staff would much rather perform a simple X-ray, rather than launch into an extensive, lenghty and labor-intensive patient evaluation with EKG, labs, urinary studies, CT of brain and X-rays. My own father-in-law was minimally assessed and misdiagnosed by an emergency physician who assumed he tripped and fell, when in fact it was later discovered he had a brain tumor which had bled.

When a paramedic is called to the scene of an elderly fall victim, it is essential that the EMT take note of the environment and speak to any witnesses. There may be vital clues as to the reason for the fall. The EMT must have a high index of suspicion for intrinsic falls as the etiology. Does the information provided by the patient make sense, or coincide with the scene or witness accounts? Consider the patients mobility level, chronic medical problems, and medications during the assessment. The EMT must pass his or her concerns along to the ED staff. The EMT must have knowledge of the *differential diagnosis of intrinsic falls*, some of which I have already mentioned. Other causes include electrolyte imbalance, medication reactions (especially sedatives, narcotics and psychiatric meds), hypoglycemia, dehydration, malnutrition, UTI, pneumonia, pacemaker failure, aortic stenosis and Parkinson's Syndrome.

Be aware and suspicious for significant injuries and underlying medical problems even if the fall initially seems insignificant (fell out of bed, from standing position, or out of the chair). The patient may have diminished pain perception and express minimal complaints. **Patients have sustained cervical fractures and spinal cord damage from falling out of bed.** The EMT should take vital signs, with careful attention to the heart rate/rhythm and blood pressure. The physical exam priorities start with the ABC's with protection and immobilization of the spine. A brief neurological exam should include mental status, papillary check and motor function. The secondary survey should include injury assessment with neurovascular check and splinting as indicated.

In conclusion, successful management of the elderly fall victim includes high index of suspicion for--and thorough knowledge of—*the intrinsic causes for geriatric falls* which are often life threatening.

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