

Are You Prepared? Office Emergencies

Joshua J. Mann, DPM

INTRODUCTION

There are many office emergencies that the foot and ankle specialist may encounter, and it is not a question of if they will occur, but when will they occur. Before reading this article consider these questions: Do you have an established game plan for when an emergency occurs? Does your staff understand their role in an emergent situation? Is the office properly supplied for emergencies? This article will cover developing a plan for emergencies in the office, provide a general list of medical supplies to be equipped with, and provide treatment recommendations for common medical emergencies.

TRAINING AND SUPPLIES

As Benjamin Franklin stated, “If you fail to plan, you plan to fail.” Medical emergencies will occur, and an established plan can help make the situation run more smoothly. Preferably, all office employees should be trained in basic life support, and physicians should be trained in both basic life support and advanced cardiac life support. All staff should then be encouraged to maintain these skills through consistent re-education (1).

Along with staff training, a written protocol needs to be established (Table 1). The protocol includes specific responsibilities to be carried out, and designated staff roles (1). The protocols must be reviewed and rehearsed with

the medical staff. This will prepare staff, and often identify unanticipated issues that need to be corrected (2,3).

It is recommended that “condition cards” with appropriate interventions be available in the office, mock trials be performed, and a nursing record be included for documentation. The nursing record can be copied and sent with the patient if they are transported to a hospital to help in continuation of care. A debriefing should be performed following the emergency to evaluate the response and make improvements as needed (4).

Common medical emergencies in the office can include: anaphylactic reactions, asthma exacerbation, cardiac arrest, hypoglycemia, strokes, seizures, and impaired consciousness (1). These conditions need to be considered when determining what supplies to have in the office (Table 2). The ability of the staff to use supplies correctly, and your office’s access and proximity to emergency services also need to be considered. Another important factor is to consider the patient base including their average age and comorbidities. Staff members need to be familiar with where supplies are located in the office (4).

TREATMENT GUIDANCE FOR COMMON OFFICE EMERGENCIES

The American Heart Association provides first aid recommendations for medical emergencies (5). Advanced cardiac life support and basic life support guidelines should

Table 1. Protocols for Office Emergencies.

Staff	Role
Front Desk/Checkout Desk	<ul style="list-style-type: none">- Identify patients in distress upon checking in, and in waiting room- Notify staff and physician of distressed patient- Alert waiting patients about possible delay- Contact 911, and provide location and description of emergency
Medical Assistants/Nurses	<ul style="list-style-type: none">- Take patient to designated room- Set up all emergency equipment- Assess vitals- Start oxygen if less than 93% oxygen saturation- Record nursing record forms
Physicians	<ul style="list-style-type: none">- Respond to call for assistance- Act as team leader
Additional Staff	<ul style="list-style-type: none">- Direct EMS once they arrive- Assist as directed

Table 2. Recommended Emergency Office Supplies.**EQUIPMENT**

Blood Pressure Cuff
 Tourniquet
 Bag Mask Ventilator
 Automated External Defibrillator (AED)
 Glucose Meter
 Intravenous catheter/butterfly needles
 Nasal Airways
 Nasal Cannula for oxygen
 Oxygen Mask
 Oxygen tank and flow meter
 Pulse oximeter
 Universal precautions (Latex free gloves, masks, and eye protection)
 CPR barrier device

MEDICATIONS

Acetaminopen
 Albuterol
 Aspirin, chewable
 Diazepam
 Diphenhydramine (Benadryl)
 Epinephrine injection
 Glucose tablets
 Lorazepam
 Nitroglycerin spray
 Saline

be followed. Below are recommendations for common medical emergencies that may occur in the foot and ankle clinic. It is suggested that cards be written with treatment guidance and available for quick reference in the office (4).

Anaphylactic Reaction

Anaphylaxis is a life-threatening systemic reaction that rapidly develops. Peak severity can occur within 5 to 30 minutes. Food, medications, and materials (for example, latex) can cause anaphylactic reactions. Not all allergic reactions lead to anaphylaxis, but a true anaphylactic reaction involves 2 or more body systems and can be life-threatening. Clinical findings can include: pruritus, urticaria, angioedema, respiratory distress (wheezing), hypotension, cardiovascular collapse, shock, abdominal cramping, and diarrhea.

Providers should call 911 for emergency response. Initial vital signs should be taken and a focused cardiopulmonary examination should be performed. Epinephrine is the first medication to be administered. The recommended epinephrine dose in adults and children greater than 30 kg, is 0.3 mg intramuscularly, and 0.15 mg for children between 15-30 kg. A second dose can be administered if the patient does not respond to the first dose, and arrival of advanced care is expected to be longer than 5 to 10 minutes (5). The most common cause of death in anaphylactic reactions is airway obstruction (6).

Asthmatic Attacks and Shortness of Breath

There are many reasons for a patient to be short of breath. Inhaled bronchodilators (albuterol) are effective for acute shortness of breath and asthma, and the adverse effects of inhaled bronchodilators are low. Providers should be familiar with the administration of inhalers. The inhaler is held approximately 2 cm in front of the patient's wide-open mouth, and a single dose is given during a slow

inhalation. The patient should then attempt to hold their breath for 10 seconds before slowly exhaling (7). Current recommendations show that there is insufficient evidence to recommend routine use of supplementary oxygen for the patient complaining of chest discomfort or shortness of breath by a first-aid provider (8-10).

Chest Pain

There are many causes for chest pain from pneumonia to angina or myocardial infarction. Common symptoms with chest pain of cardiac origin include nausea, sweating, shortness of breath, or radiating pain in the arms or back (5). When treating acute coronary syndrome, the acronym MONA (morphine, oxygen, nitroglycerin, and aspirin) is utilized, but not necessarily in that order. There is insufficient data to recommend supplemental oxygen for uncomplicated acute coronary syndrome. The American Heart Association suggests that an oxygen level greater than or equal to 94% is acceptable (11).

Aspirin decreases platelet aggregation to prevent further clot formation, and the recommended dosage is a chewable 160 to 325 mg tablet for faster absorption. Possible contraindications for aspirin include hepatic disease, active peptic ulcer disease, and bleeding disorders (11,12).

Nitroglycerin is administered to decrease pain. Different forms of nitroglycerin include sublingual tablets of 0.3 to 0.4 mg given every 5 minutes for up to 3 doses, or spray form of 1 to 2 sprays every 5 minutes up to 3 times. Nitroglycerin should be avoided in patients with a systolic blood pressure of less than 90 mm Hg. Morphine can also be administered to decrease pain and anxiety. Generally, small doses of morphine are recommended (2-4 mg, intravenously every 5 to 30 minutes). Patients must be closely monitored when administering morphine for possible respiratory distress (11,12).

Hypoglycemia

Confusion, altered behavior, sweating, and shaking can be symptoms of hypoglycemia. A glucose reading should be performed, and glucose tablets given. Evidence has shown a more rapid response with glucose tablets versus candies, orange juice, or milk (13). If glucose tablets are not available, dietary sugars can be utilized. Symptoms usually resolve within 10 to 15 minutes, and if no improvement of symptoms is noted within that time frame or the patient's status deteriorates, 911 should be called.

Seizures

Seizures are generally self-limiting, and general principles are ensuring an open airway and preventing injury. The patient should be placed in a supine position, and should not be restrained, which could cause injury. Also, no attempt should be made to open the patient's mouth. Dental damage or aspiration could occur in the attempt to place an object in the patient's mouth during time of the seizure, and therefore must not be attempted.

Emergency services should be called if a seizure lasts for greater than 5 minutes. This is considered status epilepticus, and can be fatal secondary to acidosis and extreme elevations in body temperature caused by prolonged convulsions. Intravenous administration of 5-10 mg of diazepam or 2-4 mg of lorazepam can be utilized for the treatment of status epilepticus (7).

Stroke

The early recognition of stroke can help prevent long-term neurologic deficits. Utilizing the Cincinnati prehospital stroke scale that tests for facial droop, arm drift, and abnormal speech can help determine if a patient is having a stroke (14). When a stroke is suspected, 911 should be called as soon as possible. When waiting for the emergency staff to arrive, continue to closely monitor the patient, record vital signs, and a glucose reading should be performed.

It is essential that the patient be promptly transported to a stroke center for further workup and treatment. The American Heart Association developed the Stroke Chain of Survival, which involves 8 steps to help responders and hospitals in the treatment of stroke patients (15).

In conclusion, this article provides information on how to prepare for medical emergencies in the clinic setting. It is not to be considered all-inclusive, but rather a starting point to help prepare you and your office staff in establishing emergency treatment protocols. Having staff adequately trained in basic life support, establishing treatment plans, running mock trials, obtaining the necessary supplies, and appropriately responding and documenting office emergencies can make the ultimate difference in a patient's life.

REFERENCES

1. Toback SL. Medical emergency preparedness in office practice. *Am Family Phy* 2007;75:1679-84.
2. Tobacco S. Prepare your office for a medical emergency. *Contemp Pediatr* 2002;19:107-21.
3. Roback MG. *Handbook of pediatric mock codes*. St. Louis (MO): Mosby, 1998.
4. Rothkopf L, Wirshup MB. A practical guide to emergency preparedness for office-based family physicians. *Family Pract Man* 2013;13-8.
5. American Heart Association and American Red Cross. *Web-based Integrated Guidelines for First Aid*. URL: firstaidguidelines.heart.org.
6. Copper DH, Krainik AJ, Lubner SJ, et al. *The Washington Manual of Medical Therapeutics 32nd Edition*. Lippincott Williams & Wilkins; 2007.
7. Grambart S, Decker TL. Common office emergencies. *Clin Podiatr Med Surg* 2002;19:163-85.
8. Rawles JM, Kenmore AC. Controlled trial of oxygen in uncomplicated myocardial infarction. *BMJ* 1976;1:1121-3.
9. Nicholson C. A systematic review of the effectiveness of oxygen in reducing acute myocardial ischaemia. *J Clin Nurs* 2004;13:996-1007.
10. Hazinski MF, Nolan JP. 2015 International consensus on cardiopulmonary resuscitation and emergency cardiovascular care science with treatment recommendations. *Circulation* 2015;132:S1.
11. O'Connor R. 2010 American Heart Association Guidelines for Cardiopulmonary Resuscitation and Emergency Cardiovascular Care. Part 10. Acute Coronary Syndromes. *Circulation* 2010;122 (suppl 3):S787-817.
12. Overbaugh K. Acute Coronary Syndrome. *Am J Nursing* 2009;109.
13. Slama G, Traynard PY, Desplanque N, Pudar H, Dhunpath I, Letanoux M, et al. The search for an optimized treatment of hypoglycemia: carbohydrates in tablets, solution, or gel for the correction of insulin reactions. *Arch Intern Med* 1990;150:589-93.
14. Kothari RU, Pancioli A, Liu T, Brott T, Broderick J. Cincinnati Prehospital Stroke Scale: reproducibility and validity. *Ann Emerg Med* 1999;33:373-8.
15. Jauch EC, et al. 2010 American Heart Association Guidelines for Cardiopulmonary Resuscitation and Emergency Cardiovascular Care. Part 11: Adult Stroke. *Circulation*. 2010;122:S818-28.



DIA-FOOT®

*Stylish, Name Brand
Quality Footwear*

A Step in the Right
DIRECTION



SAS

San Antonio Shoemakers®

ROCKPORT®



Dunham

- BOOTMAKERS SINCE 1885 -

BROOKS

WOLVERINE®



Hush Puppies®

Propét®

ORTHOFEET®

SEBAGO®

Call 877-405-3668 for a copy of our
new 44-page full color catalog
www.dia-foot.com