Brian K. Smith, D.D.S., M.D., Inc.

Medical Emergency Preparedness Is Vital

February 2011

Brian K. Smith, D.D.S., M.D.
Diplomate-American Board of Oral & Maxillofacial Surgeons
14601 Detroit Avenue, #630
Lakewood, OH 44107 216-228-4232 drbks@aol.com

Emergency Team

Our perception in dentistry seems to be that we know that there is a chance that we can have an office emergency, but we don't really think it is going to happen. Nonetheless, we have taken basic life support and there is always 911, so we are covered. What happens prior to emergency squad arrival? How long will it take for EMS to arrive? Who is going to help with CPR? Who is going to get the emergency kit and draw up medications? Is the staff ready?

Without properly prepared staff, the likelihood of a patent death dramatically increases in an office emergency. The staff plays a vital role in treating and diagnosing emergencies. The staff is instrumentall in updating the emergency kit and distributing medications and instruments druing an emergency. They will often recognize and/or know the patinet as well as or better than the doctor. The staff will call 911 and accept the emergency squad when they arrive. The staff may also need to help with airway maintenance, CPR, and drawing up medications. The staff may help in assessing the patient progress during the emergency. The staff will, on a moment-to-moment basis, document the procedure. They will deal with the scheduled patients amidst the event. Finally, the staff is likely to make the first contact with the family.

Emergencyes cannot be successfully handled without properly trained staff. The staff will benefit from regular regimens for checking emergency equipment and practicing ememgency protocols. They should make a habit of checking patient histories so as to be prepared for basic emergencies. The staff will benefit from regular continuting education to improve their knowledge base and emergency care skills. Are you ready? The next patient could be the one.

Syncope

We all have patients with syncopal episodes, as syncope is the most common dental emergency. I must say that I have not thought too much about syncope until recently. I used to consider syncope as a non-emergenct situation. I was uncertain of its true pathophysiology, but understood I needed to lean the patient back and give him or her oxygen. As a frequent lecturer on office emergencies, I have been able to thoroughly delve into the nature, diagnosis, and treatment of many of these types of situations, but I was startled to find out how much I did not know about syncope. It is the most common, yet least respected, dental emergency.

The pathophysiology of syncope is a reduction in blood flow to the brain that causes a sudden loss of consciousness due to peripheral pooling. This peripheral pooling will continue without muscular contraction or Trendelenberg positioning due to fatiguing of the compensatory mechanisms. The cerebral blood pressure increases 2mm HG for every inch the head is below the heart.

HAPPY NEW YEAR 2011 !

The critical blood flow to the brain is 50 to 55ml/100g/minute, which is equivalent to a systolic blood pressure of 70mm HG. Cerebral ischemia lasting longer than 10 seconds can lead to seizure activity. Amazingly, a syncopal episode can have the systolic blood pressure drop to zero with periods of asystole. If the nutrients and oxygen in the blood flow are not restored within 3 to 10 minutes, permanent brain damage can occur. In recognizing syncope, there are early prodromal signs (feeling warm, loss of color, perspiration, nausea, and tachycardia) and late prodromal signa (papillary dilation, yawning, cold hands and feet, bradycardia, hypotension, dizziness, visual disturbances, and loss of consciousness). These signs and symptoms are important to recognize because syncope can be a general indication of a wide variety of serious problems, especially in those patients younger than 15 and older than 35. In addition, patients classified as ASA III or ASA IV have a much greater likelihood of developing a life-threatening situation than those with ASA (or ASA II. The differential diagnosis of syncope is serious and can include cardiovaxcular, respiratory, cerebrovascular, medication, psychologenic, diabetic, vascular, electrolyte, and seizure-related complications.

Therefore, the most important technical aspect of treating syncope is getting blood and oxygen to the brain by giving oxygen to the patient immediately and positioning him or her into Trendelenburg position (head below the heart). Next, get oxygen on the patient at 10l/minute. Activate team and monitor ABCD's.