Dental office emergency drugs

Part 2: Understand critical office resuscitative emergency (CORE) drugs before you need them

By John Roberson, DMD

Dental practice staffs must be prepared to address medical emergencies that can, do and will happen during the course of practice. These emergencies could be related to dental treatment, patient risk factors, or they could occur unexpectedly. A medical emergency could evolve into a life-threatening emergency without proper treatment. It is for these reasons emergency medications should be present in dental offices.

The CORE 8

**Albuterol**

Definition: Bronchodilator — stimulates beta-2 adrenergic receptors causing bronchodilation.

Use: Bronchospasm (acute asthmatic attack).

Dosage: One to two puffs per dose.

Caution: No contraindications to using albuterol in acute episodes of bronchospasm.

Suggested stock: One albuterol MDI inhaler.

**Ammonia inhalants**

Definition: A respiratory stimulant.

Use: Syncope/fainting/loss of consciousness.

Dosage: 1–2 vapors per dose.

Suggested stock: One box of ammonia vapors.

**Aspirin**

Definition: Anti-platelet — inhibits prostaglandin synthesis and inhibits platelet aggregation irreversibly.

Use: Suspected myocardial infarction.

Dosage: 650–325 mg chewable tablet, chewed and swallowed.

Caution: Patients with low blood pressure, anginal attack.

Suggested stock: Two 81 mg chewable tablets.

**Diphenhydramine**

Definition: Antihistamine — antago-

izes acetylcholine at the muscarinic receptors.

Use: Anaphylaxis (EpiPen and EpiPen Jr) and 2) Three tubes of glucose tablets.

Caution: Unconsciousness. Never administer anything orally to an unconscious person.

Suggested stock: One bottle of 25 tablets.

**Glucose source**

Definition: Anti-hypoglycemic — increases glucose level for treatment of hypoglycemia.

Use: Hypoglycemia.

Dosage: One 1.5 ml vial.

Caution: Unconsciousness. Never administer anything orally to an unconscious person.

Suggested stock: One 1.5 ml vial.

**Nitroglycerin**

Definition: Anti-anginal — stimulates cGMP production, which relaxes vascular smooth muscle specifically in the coronary arteries in the presence of an anginal attack.

Use: Chest pain (angina).

Dosage: 0.3 mg IM q5 minutes.

Caution: Unconsciousness. Never administer anything orally to an unconscious person.

Suggested stock: 1) Three tubes of glucose gel (InstaGlucose™) and 2) Three tubes of glucose tablets.

**Oxygen**

Definition: Cardiac stimulant/ana-

esthetic.

Use: Reversal agent — narcotics.

Dosage: 0.3 mg IM q5 minutes.

Caution: No contraindications to giving epinephrine during anaphylaxis.

Suggested stock: 1) Two auto-injectors and 2) Diphenhydramine HCL capsules 25 mg.

**Epinephrine 1:1000**

Definition: Cardiac stimulant/ana-

esthetic.

Use: Syncope/fainting/loss of consciousness.

Dosage: At least 2 liters/minute.

Caution: Hyperventilation. Never administer anything orally to an unconscious person.

Suggested stock: One bottle of 25 tablets.

**Additional emergency drugs for consideration**

These additional emergency drugs are suggested for practices that do not have the type of advanced anesthesia, such as PO sedation, IV sedation, or general anesthesia.

Practitioners may have their own choices of emergency drugs due to their type of practice as well as training background.

**Additional emergency drugs for consideration**

**Injectable anti-cholinergic**

Atropine — anti-cholinergic. antagonizes acetylcholine at the muscarinic receptors, increasing the heart rate as well as having an anti-sialogogue effect.

**Injectable corticosteroid**

Hydrocortisone (Solu-Cortef) — anti-inflammatory. A corticosteroid secreted by the adrenal cortex which has anti-inflammatory, anti-allergic, mineralocorticoid activity and stimulates glucocorticoidogenesis.

**Dental office emergency drugs**

**Esmolol** — beta-antagonist: is a cardioselective beta receptor blocker with rapid onset and a very short duration of action, with no significant intrinsic sympathomimetic or membrane stabilizing activity at therapeutic dosages. It decreases the force and rate of heart rhythm.

By John Roberson, DMD

**Esmolol** — beta-antagonist: is a cardioselective beta receptor blocker with rapid onset and a very short duration of action, with no significant intrinsic sympathomimetic or membrane stabilizing activity at therapeutic dosages. It decreases the force and rate of heart rhythm.
DO YOU HAVE A PLAN TO RETIRE YOUR DENTAL TOOLS?

Learn How to CREATE YOUR EXIT STRATEGY from Dentistry that will allow you to Live the Lifestyle You Want and be FINANCIALLY FREE When You Retire...

2-PART EXIT STRATEGY CRASH COURSE ON CD

GET YOURS FREE TODAY!

JUST GO TO: freemymypractice.com
Patient demonstrations highlight 6-day event

Greater New York Dental Meeting scientific session, Nov. 23–28; exhibit floor: Nov. 25–28

September starts the countdown to the largest dental congress and health care meeting in the United States. Registration is open for the 2012 Greater New York Dental Meeting (GNYDM), the largest dental congress and healthcare meeting in the United States, with 53,789 attendees from all 50 states and 127 countries in 2011. A significantly expanded international program accommodated 6,656 international visitors in 2011, with sessions in French, Spanish, Portuguese, Italian and Russian.

The 2012 meeting runs Friday through Wednesday, Nov. 23–28. The high-energy event, which never has a pre-registration fee, draws top dental professionals with an expansive exhibit hall and more than 300 educational courses, including full-day and half-day seminars, essays, hands-on workshops and a live, state-of-the-art, high-tech patient demonstration area.

New York City is full of cultural enclaves that give attendees the opportunity to experience foods, festivals, arts and more from all over the globe. Few cities offer a wider variety of iconic attractions, historic buildings and cultural sites.

Three major international airports, Newark Liberty (EWR), Kennedy (JFK) and La Guardia (LGA) and discounted hotel rates for registrants, make it easy for any dental professional to visit New York City and attend the meeting.

The GNYDM staff encourages you to see all New York City has to offer during one of its most beautiful times of year.

(Source: Greater New York Dental Meeting)

In conclusion, the emergency drug kit is essential for the practice of dentistry. No practitioner is able to determine when he or she will be faced with a medical emergency that will require the use of emergency drugs. It is for that reason alone, dental healthcare practitioners should stay up-to-date on medical emergencies as well as the drugs used to treat them.

Develop a regular protocol to where you and your staff are able to rehearse various emergencies using your emergency drugs. Know their actions along with the drugs used to treat them. "I know when our patient’s life may depend on our readiness — and having the proper emergency drugs.

Disclaimer

The publisher and author have made every effort to trace the copyright holders of any borrowed material to make proper attribution. If they have inadvertently failed to attribute any copyrighted material to the correct holder, proper attribution will be given upon receipt of appropriate notice.

References

2. Journal of the American Dental Association, May 2010, Supplement on Medical Emergencies
3. Package Insert on Local Anesthesia, “WARNINGS” Section
4. Wikipedia: Central Nervous System
5. American Heart Association
6. Advanced Cardiovascular Life Support (ACLS)
7. Pediatric Advanced Life Support (PALS)
8. CRASH CART, SAJJITH KUMAR, RN, KM, MScN / Emergency Medicine: www.emergencymedicinenews.com
9. www.acs-algorithms.com

September starts the countdown to the largest dental congress and health care meeting in the United States. Photo/Provided by GNYDM

Conclusion

In conclusion, the emergency drug kit is essential for the practice of dentistry. No practitioner is able to determine when he or she will be faced with a medical emergency that will require the use of emergency drugs. It is for that reason alone, dental healthcare practitioners should stay up-to-date on medical emergencies as well as the drugs used to treat them.

Develop a regular protocol to where you and your staff are able to rehearse various emergencies using your emergency drugs. Know their actions along with the drugs used to treat them. "I know when our patient’s life may depend on our readiness — and having the proper emergency drugs.

Disclaimer

The publisher and author are not responsible (as a matter of product liability, negligence or otherwise) for any injury resulting from any material herein. This publication contains information relating to general principles of medical care that should not be construed as specific instructions for individual patients. Manufacturers’ product information and package inserts should be reviewed for current information, including contraindications, dosages, and precautions.

The purpose of this article is to provide information only, rather than advice or opinion. Nothing in this article should be construed as setting a standard of care or practice recommendations. Dental health care professionals accessing this article agree to assume full responsibility for the use of this information and hold harmless any third party, including, but not limited to the author and publisher for any claim, loss, injury or damage arising from the use or dissemination of information within this program.

It is the sole responsibility of the dental health care practitioner to determine drugs, doses and administration techniques based upon his or her evaluation of each individual situation. Dental health care practitioners are advised to continually seek confirmation of this material with other reputable sources and are advised to stay current with information as it becomes available.

The publisher and author have made every effort to trace the copyright holders of any borrowed material to make proper attribution. If they have inadvertently failed to attribute any copyrighted material to the correct holder, proper attribution will be given upon receipt of appropriate notice.

References

2. Journal of the American Dental Association, May 2010, Supplement on Medical Emergencies
3. Package Insert on Local Anesthesia, “WARNINGS” Section
4. Wikipedia: Central Nervous System
5. American Heart Association
6. Advanced Cardiovascular Life Support (ACLS)
7. Pediatric Advanced Life Support (PALS)
8. CRASH CART, SAJJITH KUMAR, RN, KM, MScN / Emergency Medicine: www.emergencymedicinenews.com
9. www.acs-algorithms.com

Injectable anti-arrhythmic

Adenosine (Adenocard) — anti-arrhythmic: used for treatment of paroxysmal supraventricular tachycardia by slowing conduction time through the AV node as well as interrupting the re-entry pathways through the AV node. Amiodarone (Cordarone) — anti-arrhythmic: a class III agent that inhibits adrenergic stimulation, which prolongs the action potential, decreases AV conduction and sinus node function. It is used for life-threatening recurrent ventricular fibrillation or hemodynamically unstable ventricular tachycardia.

Lidocaine – anti-arrhythmic: is a class IB anti-arrhythmic drug that is used intravenously for the treatment of ventricular arrhythmias.

Verapamil (Isoptin/Calan) – anti-arrhythmic: used for the treatment of paroxysmal supraventricular tachycardia, atrial flutter and atrial fibrillation.

Vasopressin (Pitressin) – an anti-diuretic hormone: adjunctive treatment used in pulseless ventricular tachycardia/ventricular fibrillation.

Conclusion

In conclusion, the emergency drug kit is essential for the practice of dentistry. No practitioner is able to determine when he or she will be faced with a medical emergency that will require the use of emergency drugs. It is for that reason alone, dental healthcare practitioners should stay up-to-date on medical emergencies as well as the drugs used to treat them.

Develop a regular protocol to where you and your staff are able to rehearse various emergencies using your emergency drugs. Know their actions along with the drugs used to treat them. "I know when our patient’s life may depend on our readiness — and having the proper emergency drugs.

Disclaimer

The publisher and author are not responsible (as a matter of product liability, negligence or otherwise) for any injury resulting from any material herein. This publication contains information relating to general principles of medical care that should not be construed as specific instructions for individual patients. Manufacturers’ product information and package inserts should be reviewed for current information, including contraindications, dosages, and precautions.

The purpose of this article is to provide information only, rather than advice or opinion. Nothing in this article should be construed as setting a standard of care or practice recommendations. Dental health care professionals accessing this article agree to assume full responsibility for the use of this information and hold harmless any third party, including, but not limited to the author and publisher for any claim, loss, injury or damage arising from the use or dissemination of information within this program.

It is the sole responsibility of the dental health care practitioner to determine drugs, doses and administration techniques based upon his or her evaluation of each individual situation. Dental health care practitioners are advised to continually seek confirmation of this material with other reputable sources and are advised to stay current with information as it becomes available.

The publisher and author have made every effort to trace the copyright holders of any borrowed material to make proper attribution. If they have inadvertently failed to attribute any copyrighted material to the correct holder, proper attribution will be given upon receipt of appropriate notice.

References

2. Journal of the American Dental Association, May 2010, Supplement on Medical Emergencies
3. Package Insert on Local Anesthesia, “WARNINGS” Section
4. Wikipedia: Central Nervous System
5. American Heart Association
6. Advanced Cardiovascular Life Support (ACLS)
7. Pediatric Advanced Life Support (PALS)
8. CRASH CART, SAJJITH KUMAR, RN, KM, MScN / Emergency Medicine: www.emergencymedicinenews.com
9. www.acs-algorithms.com