OFFICE MEDICAL EMERGENCIES

PREPARING THE DENTAL OFFICE
RAPID RESPONSE TEAM

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VANDERBILT UNIVERSITY MEDICAL CENTER
Thank You!

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- Dr. John Shea
- Dr. David Spivey
- Dr. Kevin West
- Dr. Andy Wicke
- Dr. Sean Young

interfaith dental clinic
A smile changes everything.
How Common Are Office Medical Emergencies?

• 96.6% of 4,309 dentists experienced in-office medical emergency over 10 years (*Malamed JADA 124:40, 1993*)
  • 50%-syncope
  • 25.4%-CV, Resp, CNS emergencies

• Timing of medical emergency (*Matsuura Anesth Prog 36:219, 1990*)
  • Waiting room-1.5%
  • During or just after LA-55%
  • During treatment-22%
  • After treatment-17% (2% after leaving office)
Online survey 20,014 licensed dentists
529 responses (2.8%)

76% General dentist
53% solo practice
Causes of Office Medical Emergencies

• Random medical event occurs during dental visit
  • Thyroid storm, Adrenal crisis, Acute bronchospasm, Hypoglycemia, New allergy
• Interaction of dental treatment with pre-existing conditions
  • Stress/epinephrine and hypertension, Ischemic heart disease, Cerebral-Vasc dz.
  • Sedation/GA and OSA
• Error by dentist or staff
  • Incomplete assessment-Unrecognized risks, Incomplete planning, Delayed response
Factors Influencing Risk of Medical Emergency

- Aging population
- Birth rate decline past 20 years
- Longer life expectancy (reductions in infant, childhood and early adult mortality)
- Improved public health, medical and technological advances, etc

Source(s): ChildStats.gov; US Census Bureau; ID 457822 2018
Factors Influencing Risk of Medical Emergency

- More patients with stable, complex medical problems living to receive dental care
- Increased complexity of dental procedures
  - Longer appointments-combined surgical-restorative cases
  - May magnify the influence of stress in precipitation of medical emergencies
- Demand for office anesthesia-Sedation, GA
MEDICAL CONDITIONS LIKELY TO IMPACT DENTAL TREATMENT

• CARDIAC
  • CORONARY ARTERY DISEASE
  • HYPERTENSION
  • HEART FAILURE
  • PROSTHETIC VALVE
  • CONGENITAL HEART DISEASE

• PULMONARY
  • COPD
    • EMPHYSEMA
    • CHRONIC BRONCHITIS
  • ASTHMA
  • OBSTRUCTIVE SLEEP APNEA

• NEUROLOGIC
  • SEIZURE DISORDER
  • PSYCHIATRIC / SUBSTANCE USE DISORDER

• ENDOCRINE
  • DIABETES
  • ADRENAL
  • THYROID

• RENAL
  • CHRONIC KIDNEY DISEASE
PREPARING THE OFFICE FOR MEDICAL EMERGENCIES

A Prepared office will:

• Always anticipate
• Often Prevent
• Train and rehearse to recognize and manage medical emergencies until access to advanced medical care is available

• Objectives-
  • Provide framework for preparation of an office Rapid Response Team
  • Review important medical emergency scenarios
**Team Goals:**
- Education
- Organize/Delegate
- Drill-Rehearse
- Continuing Education

**Office Rapid Response Team**

**Know Your Patient**
- Personalized Care
- Anticipation
- Prevention

**Recognition**
- Dental Team Recognizes Medical Urgency
- Medical Emergency

**Intervention**
- Dental Team Provides Life-Saving Care

**Patient Response**
- Problem Resolution
- Hand-off to First Responders
TEAM EDUCATION

• Common medical conditions
• Impact of dental treatments on underlying medical conditions
  • Manage risk of medical urgency/emergency- Modify treatment plan
• Recognize change from baseline-Critical signs/symptoms
• Appropriate responses to medical urgencies/emergencies
  • BLS/AED
  • ACLS, PALS where appropriate
Learning Resources

Meiller, T 2016
Wolters Kluwer

Malamed, S 2015
Elsevier

Am Academy Oral Med
Level I:
General/specialty dentist using only local anesthesia or nitrous oxide/oral minimal/oral moderate sedation.

Level II:
General/specialty dentist can urgently initiate IV access but does not provide deep sedation/general anesthesia (provides IV moderate sedation routinely). Provider is current in BLS. May be current in ACLS and/or PALS.

Level III:
Dentist providing deep sedation/general anesthesia. Provider is current in BLS and ACLS and/or PALS.

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<th>1 - Respiratory</th>
<th>2 - Cardiac</th>
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<td>2.2 Bradycardia (Symptomatic)</td>
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<td>2.3 Cardiac Arrest</td>
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<td>2.4 Hypertension</td>
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<td>2.5 Hypotension</td>
<td>3.5 Syncope / Altered Mental Status</td>
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<td>1.6 Ventilation &amp; Oxygenation, Hypoxia, Hyperventilation</td>
<td>2.6 Shock</td>
<td>3.6 Dizziness, Light Headache, Paleness, Sweating, Altered Mental Status, Unconsciousness</td>
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TEAM PREPARATION

- OFFICE RAPID RESPONSE PLAN
- ASSIGNMENT OF TEAM MEMBER ROLES
- MEDICAL EMERGENCY SUPPLIES
- TEAM DRILLS/REHEARSAL
- CONTINUING EDUCATION
Office Rapid Response Team

Team Responsibilities:
- Education
- Organize/Delegate
- Drill-Rehearse
- Continuing Education

Know Your Patient
- Personalized Care
- Anticipation
- Prevention

Recognition
- Dental Team Recognizes Medical Urgency
- Medical Emergency

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Patient Response
- Problem Resolution
- Hand-off to First Responders
KNOWLEDGE OF PAST MEDICAL HISTORY-NEVER TREAT A STRANGER

• ACTIVE MEDICAL PROBLEMS
• MEDICATIONS
• ALLERGIES
• SOCIAL HISTORY
  • TOBACCO, ETOH, ILICITS
WHAT SHOULD WE LEARN FROM THE PAST MEDICAL HISTORY?

• General health status, status of active diseases, medication requirements, drug allergies
  • Functional Capacity-METS (metabolic equivalents)
    • Poor (<3 METS): Light housework, level walking 2 mph,
    • Moderate (3-6 METS): Heavy housework, climbing stairs, mowing lawn, cycling 10-12 mph, walking 4 mph
    • Excellent (>6 METS): Running 10 min mile, tennis, carrying heavy load

• ASA Classification
  • ASA 1 – HEALTHY PATIENT
  • ASA 2 – MILD SYSTEMIC DZ (e.g. MILD DM)
  • ASA 3 – SEVERE SYSTEMIC DZ (e.g. SEVERE DM, CV AND RESP DZ)
GENERAL PHYSICAL ASSESSMENT

• GENERAL APPEARANCE..........WELL, ILL, FRAIL APPEARING?
• VITAL SIGNS
  • BLOOD PRESSURE
  • RESPIRATORY RATE
  • HEART RATE
  • O2 SATURATION (SpO2)
  • TEMPERATURE (if infection)
PERSONALIZED CARE

• CONSIDER MEDICAL PROBLEMS AND CURRENT STATUS
  • STABLE, RECENT PROGRESSION
• WILL DENTAL TREATMENT IMPACT STABILITY?
  • MAGNITUDE and DURATION OF DENTAL TREATMENT
  • ANESTHETIC REQUIREMENTS
    • DRUG INTERACTIONS
• MODIFICATION OF TREATMENT PLAN TO MANAGE RISK
PERSONALIZED CARE-WHEN TO SEDATE

- HEALTHY PATIENT
  - FEAR, APPHRENSION, ANXIETY

- HYPERTENSION
  - LABILE BP IN DENTAL OFFICE

- ISCHEMIC HEART DISEASE
  - ENDOGENOUS CATECHOLAMINES
  - CARDIAC WORK (HR X BP)
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Recognition of Medical Urgency/Emergency

- Patient symptoms—chest pain, SOB, etc.
- Staff, doctor concerned—“Does not look right,” change from baseline
- Change in mental status, unresponsive, loss consciousness
- Change in vital signs
  - Labored breathing, rapid breathing, noisy breathing, cessation of breathing
  - SBP <90 >200
  - Pulse <40 >120
  - No pulse
- Seizure activity
Team Responsibilities:
- Education
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Office Rapid Response Team
DOCTOR AND STAFF INTERVENTION

• ORGANIZED RESPONSE – EACH DENTAL TEAM MEMBER HAS A ROLE
  • DOCTOR – Remains with patient, Directs interventions, Manages airway, Decision to activate 911
  • STAFF #1(DA)-”Activate Rapid Response,” Assist doctor, Apply O2, etc., BLS
  • STAFF #2 (DA, hygienist) – Retrieves emergency equipment, Assists Staff #1 with BLS, Documents time-based record of events
  • STAFF #3 (manager, tx. coord.)-Rover-Calls 911, Liaison with family/other patients, Meets EMS
  • STAFF #4 (DA, hygienist) – If available, backs-up for Rover.
UNRESPONSIVE PATIENT
2015 AHA GUIDELINES FOR ADULT/adolescent CPR

- EMPHASIS ON HIGH QUALITY CPR
  - ASSESS PATIENT (<10 SEC)
    - UNRESPONSIVE
    - NO EFFECTIVE BREATHING, NO PULSE
  - ACTIVATE OFFICE RAPID RESPONSE / CALL 911

- DON’T DELAY CHEST COMPRESSIONS
  - 100-120/MIN, 2” COMPRESSION, ALLOW RECOIL
  - 30:2 (15:2 CHILD/2 RESCUER)
BEYOND BLS/AED-OFFICE EMERGENCY KIT

• APPROPRIATE FOR DOCTOR TRAINING, ANESTH. TECHNIQUES, PATIENT POPULATION, EMS RESPONSE TIME
BASIC EMERGENCY KIT

- OXYGEN (mask, nasal cannula, adjuncts)
- AED
- SUCTION
- DRUGS
  - NITROGLYCERINE
  - EPINEPHRINE
  - BENADRYL
  - ALBUTEROL
- ORAL GLUCOSE SOURCE
- GLUCOMETER
BLS AND AED

- TURN ON AED-FOLLOW INSTRUCTIONS
- APPLY PADS
- DO NOT TOUCH PATIENT-ANALYZE
- SHOCK IF ADVISED
- RESUME CPR-DO NOT TURN OFF
RESCUE BREATHING

- AFTER 30 COMPRESSIONS
- OPEN AIRWAY
- DELIVER 2 BREATHS EACH OVER 1 SEC
  - MOUTH-TO-MASK, BAG-VALVE-MASK
AIRWAY ADJUNCTS
ADVANCED EMERGENCY SUPPLIES

- ACLS PROTOCOL
- ADVANCED AIRWAY SUPPLIES
- MANUAL DEFIBRILLATOR, TRANSCUTANEOUS PACER
PEDIATRIC EMERGENCY SUPPLIES

- MASKS
- AIRWAYS
- BAG-MASK
URGENT / EMERGENT OFFICE SCENARIOS

- VASOVAGAL SYNCOPE
- BRONCHOSPASM
- ALLERGIC REACTION
- CHEST PAIN / HYPERTENSION
- LOCAL ANESTHETIC REACTIONS
- SEIZURE
- STROKE
- DIABETES - HYPOGLYCEMIA
SYNCOPE

- SUDDEN BRIEF LOSS CONSCIOUSNESS DUE TO INADEQUATE CEREBRAL PERFUSION

• Causes
  - **Cardiac**-bradycardia, tachycardia, structural heart dz.
  - **Orthostatic hypotension**-volume depletion, drug induced
  - **Neurocardiogenic** (vasovagal syncope)-emotional stress, orthostatic stress
Vasovagal Syncope

- Most common syncope - 30-50% dental office emergencies

  - Triggers
    - Emotional stress (Fear, anxiety, pain)
    - Orthostatic stress (Prolonged standing, dehydration)

  - Pre-syncope
    - Increased sympathetic activity, tachycardia
    - Blood redistribution/pooling - low BP
    - Warmth, tunnel vision, ringing ears

  - Syncope
    - Reflex cardioinhibitory response — increased vagal output - bradycardia
    - Vasodepressor response — decreased sympathetic activity - decreased vascular tone
    - Decreased cardiac output - inadequate cerebral perfusion
    - Pale, diaphoretic, profound bradycardia, low BP
COMPLICATED SYNCOPE

- MYOCLONIC ACTIVITY - CEREBRAL HYPOXIA
- PERSISTENT SYMPTOMS
  - LOW BP, NAUSEA, ETC.
- JUNCTIONAL RHYTHM
- MYOCARDIAL ISCHEMIA - CHEST PAIN / AMI
MANAGEMENT OF VASOVAGAL SYNCOPE

- HEAD DOWN - FEET UP
- AMMONIA INHALENT (PRE-SYNCOPE)
- OXYGEN IF SpO2 < 94%
- HEAD TILT-CHIN LIFT
- RIDE IT OUT

- VITAL SIGNS
  - RADIAL PULSE = SBP 80 mmHg
  - CAROTID PULSE = SBP 60 mmHg
MEASURES TO MINIMIZE SYNCOPEAL EVENTS

• AVOID HYPOGLYCEMIA / DEHYDRATION
  • LIMIT FASTING TO 6 HOURS
  • ENCOURAGE CLEAR LIQUIDS UP TO 2 HRS PRIOR TO SEDATION

• MANAGE ANXIETY
  ▪ PATIENT EDUCATION / REASSURANCE
  ▪ ANXIOLYSIS PRE-MED
  ▪ I.V. SEDATION (BUT USUALLY OCCURS WITH I.V.)

• SUPINE POSITIONING (LIMIT ORTHOSTATIC STRESS)
BRONCHOSPASM - ASTHMA

• HISTORY OF ASTHMA / COPD
• TRIGGERS
  ▪ ACUTE ALLERGIC REACTION (BISULFITE)
  ▪ COLD EXPOSURE, EXERCISE, STRESS
  ▪ CHEMICAL EXPOSURE
  ▪ RESP. INFECTION
  ▪ GERD
BRONCHOSPASM PHYSICAL FINDINGS

- WHEEZING, COUGHING, DISTRESS
- INCREASED WORK OF BREATHING
- RAPID RESP. RATE AND PULSE
- LOW SpO2
- CO2 RETENTION
BRONCHOSPASM HISTORY

• HISTORY
  • MAGNITUDE OF SXS, ACTIVITY MODIFICATIONS
  • E.D. VISITS, SYSTEMIC STEROIDS
  • AGGRAVATING FACTORS / TRIGGERS
  • 1, 2, 3 or 4 DRUG MANAGEMENT

• CURRENT STATUS
  • SUBJECTIVE AND PHYSICAL EXAM
  • PEAK EXPIRATORY FLOW ( > 80 % PERSONAL BEST )
  • ASTHMA CONTROL TEST (score 5-25) If <19 control suboptimal

• KNOW HOW YOUR PATIENT MANAGES BRONCHOSPASM
BRONCHOSPASM PREVENTION

• DEFER TREATMENTS IF NOT BASELINE
• CONFER WITH FAMILY PHYSICIAN IF LABILE
• AVOID TRIGGERS
  • STRESS, ALLERGENS, CHEMICALS, LATEX, ETC.
ACUTE BRONCHOSPASM MANAGEMENT

• UPRIGHT POSITION
• OXYGEN (SpO2)
• ALBUTEROL METERED DOSE INHALER
  • 2-6 PUFFS, REPEAT IN 20 min prn
• ACTIVATE 911 IF NO RESPONSE OR SEVERE
• EPINEPHRINE (1: 1,000) Anterolateral thigh
  • ADULT (>30kg): .2 – .5 ml IM (EpiPen = 0.3 mg) May repeat q 15min
  • CHILD (15-30kg): .01 ml/kg IM (EpiPen Jr = 0.15 mg)
HYPERSENSITIVITY/ALLERGIC REACTIONS

• **IMMEDIATE** (0 - 1 hr)
  - URTICARIA / ANGIOEDEMA
  - LARYNGEAL EDEMA
  - BRONCHOSPASM
  - ANAPHYLAXIS-CIRC. COLLAPSE

• **ACCELERATED** (1 - 72 hr)
  - URTICARIA / ANGIOEDEMA
  - LARYNGEAL EDEMA
  - BRONCHOSPASM
PREVENTION / MANAGEMENT
HYPERSENSITIVITY REACTIONS

• CAREFUL ALLERGY HISTORY - AVOID TRIGGERS

• MILD REACTION (NO RESP. SXS )
  • STOP EXPOSURE
  • BENADRYL (DIPHENHYDRAMINE)
    • ADULT - 25 -50 mg any route
    • CHILD (6 – 11 ) – 12.5 – 25 mg p.o. (1-2mg/kg IV)

• ORAL / IV CORTICOSTEROID
ANAPHYLAXIS

• LIFE-THREATENING MULTISYSTEM REACTION-USUALLY 5-30 MIN AFTER EXPOSURE
• IMMUNOLOGIC (IgE) AND NON-IMMUNOLOGIC TYPES
• PROMPT RECOGNITION CRITICAL

• SKIN: FLUSHING, URTICARIA / ANGIOEDEMA, PRURITIS
• MOUTH: ITCHING, SWELLING OF LIPS, TONGUE
• RESP: RHINORRHEA, WHEEZING, STRIDOR / OBSTRUCTION
• GI: NAUSEA / VOMITING, CRAMPING, DIARRHEA
• CV: HYPOTENSION, TACHYCARDIA, MYOCARDIAL ISCHEMIA, DYSRHYTHMIA, ARREST
MANAGEMENT OF ANAPHYLAXIS

• ACTIVATE EMS, SUPINE POSITIONING, O2
• REMOVE TRIGGER-STOP EXPOSURE
• EPINEPHRINE (1:1,000) IM Anterolateral thigh
  • ADULT (>30kg) .3ml (Adult EpiPen = 0.3 mg) May repeat q 15min If not using EpiPen .3-.5ml dose
  • CHILD (15-30kg) .15mg (Children’s EpiPen Jr = 0.15 mg) (.01mg/kg)
• GLUCAGON-TAKING BETA BLOCKER AND REFRACTORY TO EPI
  Adult: 1-5mg IV over 5 min Child: 20-30mcg/kg IV over 5 min
• SUPPLEMENTAL O2
• VITAL SIGNS
MANAGEMENT OF ANAPHYLAXIS

• IV FLUIDS 1-2 LITERS
• EPI- 2-5 ml 1:100,000 (10mcg/ml) = 20-50mcg I.V. SLOWLY
• EPI-INFUSION IF NOT RESPONDING AND/OR HYPOTENSIVE AFTER FLUID BOLUS .1mcg/kg/min (1mg IN 1 LITER NS=1mcg/ml)

• ADJUNCTIVE MEASURES
  • BENADRYL age>12: 25-50mg IV, Children 1mg/kg over 5 min
  • FAMOTADINE (Pepcid)- Adult 20mg IV, Child .25mg/kg over 2 minutes
  • HYDROCORTISONE 100mg – LITTLE EVIDENCE OF BENEFIT
SEIZURE

• INCREASED INCIDENCE AGE < 11 > 60
• ETIOLOGY
  • SEIZURE DISORDER - EPILEPSY
  • VASOVAGAL SYNCOPE
  • LA TOXICITY-INTRAVASCULAR INJECTION
  • HYPOXIA / HYPERCARBIA
  • HYPOGLYCEMIA
  • ↓Ca++ ( HYPERVENTILATION )
MANAGEMENT OF SEIZURE

• PROTECT FROM INJURY - MOST <2min DURATION
• PROTECT / MAINTAIN AIRWAY
  • REMOVE ORAL INSTRUMENTS
  • SUCTION
  • O2
• MONITOR VITAL SIGNS
• POSSIBLE TREATABLE CAUSE
  • VASOVAGAL SYNCOPE, HYPERVENTILATION, HYPOGLYCEMIA
• ACTIVATE EMS IF > 5min, NEW SEIZURE
ANGINA

• IMBALANCE BETWEEN MYOCARDIAL OXYGEN SUPPLY - DEMAND
  
  • **O2 SUPPLY:** CORONARY ARTERY NARROWING, HEART FAILURE, ANEMIA, HYPOXIA
  
  • **O2 DEMAND:** TACHYCARDIA, HYPERTENSION, CATECHOLAMINES
ANGINA

• DEEP, SUBSTERNAL, SQUEEZING, SMOTHERING PAIN
• RADIATION TO SHOULDERS, ARMS, JAW, BACK, ETC.
• ANGINAL EQUIVALENTS
  • ISOLATED JAW, ARM PAIN
  • SWEATING
  • WEAKNESS, LIGHTHEADEDNESS
  • SHORTNESS OF BREATH
  • NAUSEA
ANGINA - MANAGEMENT

• SUPPLEMENTAL O2, VITAL SIGNS

• 911 IF NEW, ATYPICAL OR SEVERE (ACE/AMI)

• NITROGLYCERIN .4 mg, SL q5 min X 3 IF SBP >90, NO E.D. Rx PAST 24-48 HOURS

• ASPIRIN 325 mg CHEWED IF AMI

• RESOLVED PAIN
  ▪ TERMINATE DENTAL TREATMENT
  ▪ CONFER WITH PCP / CARDIOLOGIST
DENTAL CARE FOR THE PATIENT WITH ISCHEMIC HEART DISEASE

• TAKE USUAL CARDIAC / BP MEDS

• VITAL SIGNS BEFORE TREATMENT

• MANAGE STRESS, CATHECHOLAMINES
  • CONSIDER SEDATION
  • EXCELLENT LOCAL ANESTHESIA

• AVOID or LIMIT VASO-CONSTRICTOR ( max. .04 mg = 2 carpules 1:100,000 )
MANAGEMENT OF THE HYPERTENSIVE PATIENT

- RISK FACTOR FOR CAD, HT FAILURE, STROKE, KIDNEY DZ, VISION LOSS
- EVALUATE BP: DENTIST ROLE IN DETECTION, MEDICATION /COMPLIANCE
- CONSIDER BP CONTROL AND IMPACT OF DENTAL TREATMENT
- DO NOT “HOLD” BP MEDS
- CONSIDER SEDATION
- MINIMIZE EPI

**Definition Hypertension 2020**

Normal: <120 SBP and < 80 DBP
Elevated: 120-129 and < 80 DBP
Stage 1: 130-139 or 80-89 DBP
Stage 2: ≥140 or ≥ 90 DBP
LOCAL ANESTHETIC REACTIONS

• TOXICITY-INTRAVASCUAR, TOO FAST, TOO MUCH
• VASOCONSTRICTOR REACTIONS
• ALLERGY
  • METABISULFITE – ESP. WITH ASTHMA
• METHEMOGLOBINEMIA
  • PRILOCAINE, BENZOCAINE, LIDOCAINE, ARTICAINE )
LOCAL ANESTHETIC TOXICITY

- CAUTION VERY YOUNG/OLD, PULM Dz., HEART FAILURE, HEPATIC Dz.
- PREMONITORY
  - LIGHTHEADED, DROWSY
  - PERIORAL PARESTHESIA
  - TINNITUS
  - BLURRED VISION
  - VERTIGO
  - MENTAL STATUS CHANGES
    - CONFUSION, APPREHENSION
LOCAL ANESTHETIC TOXICITY

• CNS TOXICITY
  • SEIZURES (depression inhibitory pathways)
  • CNS DEPRESSION (depression excitatory pathways)
    • RESPIRATORY DEPRESSION, RESPIRATORY ARREST

• CARDIOVASCULAR TOXICITY
  • INITIAL TACHYCARDIA
  • NEGATIVE INOTROPIC EFFECT, HYPOTENSION
  • SYMPATHETIC BLOCKADE

• MANAGE AIRWAY, SEIZURES, ARREST

• 20% LIPID EMULSION FOR CARDIAC TOXICITY
  • Adult Dose (>70kg): 100ml bolus then 200-250ml over 15-20min
  • Peds Dose (<70kg): 1.5ml/kg bolus then .25ml/kg/min infusion
STROKE

• 5th LEADING CAUSE OF DEATH IN US

• CLASSIFICATION
  • ISCHEMIC
    • TIA
    • CEREBRAL INFARCT
  • HEMORRHAGIC
    • HYPERTENSION
    • VASC. MALFORMATION
    • TRAUMA
    • COCAINE/METH
STROKE: PHYSICAL FINDINGS

• SUDDEN NEUROLOGIC DEFICIT
  • SLURRED SPEECH, APHASIA
  • FACIAL WEAKNESS
  • EXTREMITY WEAKNESS
  • BLINDNESS
  • CONFUSION, VERTIGO
  • HEADACHE, VOMITING, DECREASED LOC (HEMORRHAGIC)
STROKE: MANAGEMENT

- EMS
- OXYGEN
- MAINTAIN AIRWAY, SUCTION
- RAPID TRANSPORT FOR POSSIBLE THROMBOLYTIC THERAPY (3-4 HOURS)
DIABETES MELLITUS

• TYPE 1
  • PANCREATIC ISLET CELL DESTRUCTION, INSULIN DEFICIENCY
    • AUTOIMMUNE
    • IDIOPATHIC

• TYPE 2
  • RELATIVE INSULIN DEFICIENCY, INSULIN RESISTANCE
ACUTE HYPOGLYCEMIA

• BLOOD GLUCOSE < 65 mg%

• SIGNS / SYMPTOMS
  • AUTONOMIC: SWEATING, DIAPHORESIS, TREMOR, ANXIETY, NAUSEA (~50mg/dl)
  • NEUROLOGIC: DIZZINESS, CONFUSION, HEADACHE, IMPAIRED CONCENTRATION, LOC, SEIZURE (~40mg/dl)

• HYPOGLYCEMIC UNAWARENESS – NEURO SYMPTOMS OCCUR WITHOUT AUTONOMIC WARNINGS
MANAGEMENT ACUTE HYPOGLYCEMIA

• CONFIRM LOW BLOOD GLUCOSE

• CONSCIOUS PATIENT
  • ORAL GLUCOSE SUPPLEMENT
    • GLUCOSE TABLETS / GELS
    • HARD CANDY, 5 oz. SOFT DRINK, FRUIT JUICE, ETC.

• UNCOOPERATIVE / UNCONSCIOUS PATIENT
  • EMS
  • IF I.V. ACCESS: D50 1 AMPULE
  • NO I.V. ACCESS - GLUCAGON 1mg IM
MANAGEMENT OF THE DIABETIC DENTAL PATIENT

• AVOID DISRUPTION OF DIET, MEDS
  • NO MODIFICATION FOR GENERAL DENTAL CARE

• SEDATION
  • NO AM HYPOGLYCEMICS, INSULIN
  • GLUCOSE CHECK BEFORE /AFTER SEDATION
  • COMPROMISED CHO INTAKE-CAREFUL GLUCOSE MONITORING

• PROPHYLACTIC ANTIBIOTIC IF A1c ≥8
Office Rapid Response Team

Team Responsibilities:
- Education
- Organize/Delegate
- Drill-Rehearse
- Continuing Education

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- Anticipation
- Prevention

Recognition
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- Dental Team Provides Life-Saving Care

Patient Response
- Problem Resolution
- Hand-off to First Responders