MANAGEMENT OF CARDIAC ARREST

Cardiac arrest is a sudden loss of blood flow resulting from the failure of the heart to pump effectively. Signs include loss of consciousness.

Some individuals may:

experience abnormal or absent breathing, shortness of breath , or nausea before cardiac arrest.If not treated within minutes, it typically leads to death.

Management

Cardiopulmonary Resuscitation

Early cardiopulmonary resuscitation (CPR) is essential to surviving cardiac arrest with good neurological function. It is recommended that it be started as soon as possible with minimal interruptions once begun. The components of CPR that make the greatest difference in survival are chest compression and defibrillating shockable rhythms.After defibrillation, chest compressions should be continued for two minutes before a rhythm check is again done.

Defibrillator

Defibrillation is indicated if a shockable rhythm is present. The two shockable rhythms are ventricular fibrillation and pulseless ventricular tachycardia . In children 2 to 4 J/Kg is recommended.

In addition, there is increasing use of public access defibrillation. This involves placing an automated external defibrillator in public places, and training staff in these areas how to use them. This allows defibrillation to take place prior to the arrival of emergency services and has been shown to lead to increased chances of survival.

Medication

This includes the use of atropine,lidocaine and amiodarone. Epinephrine in adults, as of appears to improve survival but does not appear to improve neurologically normal survival. It is generally recommended every five minutes. Vasopressin overall does not improve or worsen outcomes compared to epinephrine.

MANAGEMENT OF CARBON MONOXIDE POISONING

Carbon monoxide poisoning is a major cause of illness and death . Most cases result from exposure to the internal combustion engine and to stoves burning fossil fuels. Most cases of accidental exposure are preventable if proper precautions are taken; however, when cases arise, their presenting signs and symptoms are nonspecific and often lead to a misdiagnosis resembling a flu-like viral illness. As a result, the incidence of acute CO poisoning is underestimated. The effects of CO poisoning are due to tissue hypoxia, with the CNS and the heart being the most susceptible target organs due to their high oxygen needs. Prolonged hypoxia due to high CO levels may lead to cardiac arrhythmias or arrest (or both) and a variety of neurologic sequelae. Treatment is directed toward the relief of tissue hypoxia and the removal of CO from the body. Severity of poisoning can be divided into three levels based on CO levels in the blood. Administration of normobaric 100 percent oxygen is the therapy of choice for most cases, while hyperbaric oxygen therapy is reserved for severe poisonings.

MANAGEMENT OF FOREIGN BODY IN THE EYE

Management objectives include relieving pain, avoiding infection, and preventing permanent loss of function.

Topical antibiotic drops (eg, polymyxin B sulfate-trimethoprim [Polytrim], ofloxacin [Ocuflox], tobramycin [Tobrex] qid) or ointment (eg, bacitracin [AK-Tracin], ciprofloxacin [Ciloxan] qid) should be prescribed until the epithelial defect heals to prevent infection.

Pressure patch or bandage contact lens is best avoided. The following scenarios represent high risk for the patient to develop permanent vision loss. Do not patch if any of the following are present:

\* A chance of a perforation of the globe exists.

\* A corneal infiltrate is present.

\* A chance of a retained intraocular foreign body is possible.

Surgical Care

Remove the foreign body using irrigation, a sterile needle, or a foreign body removal instrument. Do not remove if likelihood of penetration through more than 25% of the cornea exists.

Remove a rust ring with an Alger brush or automated burr. Only those clinicians who are trained in and regularly perform this procedure should complete it.

Foreign bodies that present any potential for intraocular penetration must by explored in the operating room. These injuries should be explored within 24 hours of initial examination.

MANAGEMENT OF EPISTAXIS

Epistaxis (nasal bleeding) is relatively common but rarely fatal. Anterior bleeding is usually managed by digital pressure, gentle chemical cauterization, or nasal packing. Posterior bleeding, which is less common, is characterized by massive bleeding that's initially bilateral; this bleeding may be more difficult to control.

How to Manage Epistaxis

- Put on protective gear, including gown, gloves, and face shields. Quickly assess the ABCs (airway, breathing, and circulation) and support them as indicated. Reassure the patient.

- Have the patient sit upright with her head tilted forward, and instruct her to apply direct external digital pressure to the nares with her index finger and thumb. Tell her to breathe through her mouth while she holds firm pressure on the soft flesh of her nose for at least 10 minutes. If bleeding persists, cotton pledgets soaked in a vasoconstrictor and anesthetic will be placed in the anterior nasal cavity, and direct pressure should be applied at both sides of the nose.

- Ensure bedside suction is functioning properly. Provide an emesis basin and tissues. Tell her to spit blood into the basin if necessary. This helps prevent nausea and vomiting and lets you estimate the amount of bleeding.

- Obtain vital signs and SpO2 level, and assess her breath sounds. Administer supplemental oxygen via facemask if needed. Continue to monitor vital signs closely.

- Assess for signs and symptoms of hemodynamic instability, including change in mental status, pallor, diaphoresis, hypotension, tachycardia, and tachypnea.

- If bleeding is significant, establish vascular access, place the patient on a cardiac monitor, and begin fluid resuscitation with a crystalloid solution, as prescribed. Obtain specimens for blood work, including complete blood cell count and coagulation profile, as prescribed.

- Obtain a focused health history, including previous nosebleeds, other bleeding episodes, easy bruising, and medication use, especially use of aspirin and other nonsteroidal anti-inflammatory drugs (NSAIDs), antiplatelet agents, warfarin, and herbal products.

- If bleeding persists, assist in preparing the epistaxis tray and a headlamp. Make sure lighting is adequate. Once the bleeding site is identified, the definitive treatment is cautery (silver nitrate or electrical). If cautery is unsuccessful, nasal packing will be used to apply direct pressure to the bleeding site. During the procedure, reassure the patient, monitor vital signs, and assess for hypoxia.

- After bleeding is controlled, reassess the patient and provide oral care. Keep the patient's mouth moist while the packing is in place.

- If packing is used, especially posterior packing, monitor for respiratory compromise. Tell the patient to report signs and symptoms of infection and teach her about any prescribed antibiotics. If she has posterior packing, she'll be admitted to the hospital. A patient with anterior packing will follow up with an ear, nose, and throat specialist as an outpatient.

- The nasal packing will be left in place for 3 to 5 days. Instruct the patient to avoid exerting herself, forcefully blowing her nose, or bending over. She should also avoid NSAIDs, alcoholic beverages, and smoking for 5 to 7 days. Tell her to apply water-soluble ointment to her lips and nostrils while packing is in place and to use a cool-mist room humidifier. Advise her to take steps to prevent constipation and straining, which increases the risk of bleeding.

- Don't leave the patient unattended during -epistaxis.