HEART RHYTHMS

Signs and Symptoms Risks and Possible Treatments Nursing Interventions

1. SINUS BRADYCARDIA

A. Causes
i. Hypoglycemia | Hypothermia | Hypothyroidism | Previous cardiac history | Medications | Toxic exposure | MI – Inferior wall involving right coronary artery

B. Signs and Symptoms
i. Syncope | Dizziness | Chest Pain | Shortness of Breath | Exercise Intolerance | Cool, clammy skin

C. Risks
i. Reduced Cardiac Output

D. Medical Treatments
i. Atropine | Pacing if the patient is hemodynamically compromised | Treatment will be based on whether patient is symptomatic

E. Nursing Interventions
i. Assess patient – Are they symptomatic? -Give oxygen and monitor oxygen saturation -Monitor blood pressure and heart rate - Start IV if not already established - Notify MD

2. SINUS TACHYCARDIA

A. Causes
i. Damage to heart tissues from heart disease | Hypotension | Fever | Stress | Excess alcohol, caffeine, nicotine, or recreational drugs such as cocaine | A side effect of medications | Response to pain | Imbalance of electrolytes | Hyperthyroidism

B. Signs and Symptoms
i. Dizziness | Shortness of breath | Lightheadedness | Rapid pulse rate | Heart palpitations | Chest pain | Syncope

C. Risks
i. Cardiac output may fall due to inadequate ventricular filling time | Myocardial oxygen demand increases | Can precipitate myocardial ischemia or infarct

D. Medical Treatments
i. Find and treat cause

E. Nursing Interventions
i. Assess patient – Are they symptomatic? Are they stable? - Give oxygen and monitor oxygen saturation - Monitor blood pressure
3. ATRIAL FLUTTER

A. Causes
   i. Valve disorder (mitral) | Thickening of the heart muscle | Ischemia | Cardiomyopathy | COPD | Emphysema

B. Signs and Symptoms
   i. Palpitations | SOB | Anxiety | Weakness | Angina | Syncope

C. Risks
   i. Clot formation in atria | Dramatic drop in cardiac output

D. Medical Treatments
   i. Cardioversion – treatment of choice | Antiarrhythmics such as procainamide to convert the flutter | Slow the ventricular rate by using diltiazem, verapamil, digitalis, or beta blocker | Heparin to reduce incidence of thrombus formation

E. Nursing Interventions
   i. Assess Patient | O2 if not already given | Start IV if not already established and hang NS | Notify MD | Prepare for cardioversion

4. ATRIAL FIBRILLATION

A. Causes
   i. Hypoxia | Hypertension | Congestive heart failure | Coronary artery disease | Dysfunction of the sinus node | Mitral valve disorders | Rheumatic heart disease | Pericarditis | Hyperthyroidism

B. Signs and Symptoms
   i. Heart palpitations | Irregular pulse which feels too rapid or too slow, racing, pounding or fluttering | Dizziness or light-headedness | Fainting | Confusion | Fatigue | Trouble breathing | Difficulty breathing when lying down | Sensation of tightness in the chest

C. Risks
   i. Clot formation in atria (atria not completely emptying) | Stroke | Pulmonary Embolism | Dramatic drop in cardiac output

D. Medical Treatments
   i. Rate control (slow ventricular rate to 80-100 beats/minute) | Antithrombotic therapy | Correction of rhythm | Chemical or electrical cardioversion
5. VENTRICULAR TACHYCARDIA

**A. Causes**
- Usually occurs with underlying heart disease
- Commonly occurs with myocardial ischemia or infarction
- Certain medications may prolong the QT interval predisposing the patient to ventricular tachycardia
- Electrolyte imbalance
- Digitalis toxicity
- Congestive Heart failure

**B. Signs and Symptoms**
- Chest discomfort (angina)
- Syncope
- Light-headedness or dizziness
- Palpitations
- Shortness of breath
- Absent or rapid pulse
- Loss of consciousness
- Hypotension

**C. Risks**
- Major cause of sudden cardiac death

**D. Medical Treatments**
- If there is no pulse, begin CPR and follow ACLS protocol
- If there is a pulse and the patient is unstable - cardiovert and begin drug therapy

**E. Nursing Interventions**
- Assess your patient
- If symptomatic, treatment must be aggressive and immediate
- Pulse present
  - Oxygen
  - Patent IV (preferably x2)
  - Monitor patient very closely
- Pulseless
  - ACLS protocol

6. VENTRICULAR FIBRILLATION

**A. Causes**
- AMI
- Untreated VT
- Electrolyte imbalance
- Hypothermia
- Myocardial ischemia
- Drug toxicity or overdose
- Trauma

**B. Signs and Symptoms**
- Loss of consciousness
- Absent pulse

**C. Risks**
- Death

**D. Medical Treatments**
- CPR with immediate defibrillation
- Initiate ACLS algorithm

**E. Nursing Interventions**
- ACLS

**REFERENCES:**