

# Hypertension

## Prevention/prophylaxis

- Lifestyle modification
- Routine BP monitoring: Home self b/p.
- Monitor quality of life ( address dizziness, fatigue, sexual function, fall)

## Referral

- Unusual signs and symptoms
- Suspected secondary cause

## Education

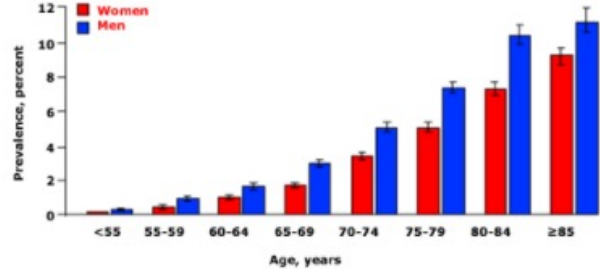
- Routine BP monitoring
- Proper BP measurement technique
- Encourage compliance

# Atrial fibrillation (Afib)

- Afib: paroxysmal or continuous supraventricular tachyarrhythmia characterized by rapid, uncoordinated atrial electrical activity and an irregularly irregular ventricular response. In most patients

# Tachyarrhythmias – Atrial fibrillation- updated 2022

Prevalence of atrial fibrillation with age



- The most common sustained arrhythmia seen in clinical practice
- Incidence and prevalence increase exponentially with age, such that the prevalence in octogenarians is approximately 10%
- Patients over age 80 account for approximately 35 percent of patients with AF and the prevalence of AF is about 10 percent
- rate control has often been preferred in the elderly patients for the following reasons:
  - They are more sensitive to the proarrhythmic effects of drugs
  - AF is often permanent
  - AF is often asymptomatic

# Types of Atrial fibrillation

1. Paroxysmal: Episodes last < 7 days vast majority less than 24 hours. Respond to cardioversion
2. Persistent: Last > 7 days, respond to cardioversion but may occur again
3. Permanent: Present > 1 year, usually failed cardioversion

## Valvular Afib vs Nonvalvular Afib

Valvular Afib: affects people who have moderate to severe valve diseases only or an artificial valve.

NonValvular AFIB: atrial fibrillation that isn't caused by a problem with a heart valve

## Risk and contributing factors:

- Most common Risk factors:

- Age
- HTN,
- Obesity

- Other risk factors

- Male sex
- European ancestry (Caucasians)
- Diabetes

- *Most are idiopathic.*
- Coronary artery disease
- Heart failure
- Cardiomyopathy (ischemic or nonischemic)
- Valvular diseases (e.g., mitral regurgitation, mitral stenosis)
- Hyperthyroidism
- Cardiac procedures or surgeries
- Alcohol abuse
- Sleep apnea
- COPD
- Serious infections (e.g., pneumonia)

## AF: CLINICAL FEATURES

- Symptoms related to AF are highly variable
  - Often asymptomatic specially if ventricular response is 60 to 100 beat per minute
  - Most common: palpitations, shortness of breath, impaired exercise tolerance, dizziness, presyncope or syncope, fatigue, anxiety, chest pressure.
- Physical exam:
  - Irregularly irregular heart rate and pulse with pulse deficit



# Diagnostics (Class)

- History and physical:
- In patients with ongoing AF, the standard 12-lead electrocardiogram is diagnostic
  - Absence p wave, irregular QRS interval, and usually tachycardia
- Ambulatory rhythm monitoring (Holter monitoring) is helpful in diagnosing paroxysmal AFib or AFLut and monitoring for recurrence
- Initial Lab studies:
  - CBC, CMP, thyroid function, renal functions, Toxicology screen (if you suspect drug use), D-dimer, BNP (r/o HF),
  - PT/INR if you contemplate anticoagulation.
  - troponin if suspect unstable angina or MI. (if you feel you need this, transfer to ER)
  - If patient is on digoxin, order a level.



## Follow-up tests

- Exercise stress test
- Holter monitor
- Chest x-ray (CXR) for cardiopulmonary disease
- Echocardiogram
- TEE (Transesophageal echocardiogram) to detect left atrial appendage thrombus if cardioversion is planned
- Sleep study may be useful if sleep apnea is suspected.



# MANAGEMENT OF AF

- Decision making:
  - Heart rate versus rhythm control.
  - Anticoagulate or not.
- Behavioral modifications:
  - Avoid stimulant (caffeine, nicotine, decongestant) and ETOH above recommended guidelines
  - Encourage physical activities and weight reduction

# MANAGEMENT OF AF

- Identify and treat the underlying cause(s), such as:
  - Treat the hyperthyroidism.
  - Treat the hypertension.
  - Manage electrolyte unbalance
- Principal strategies for relieving symptoms: control of heart rate and/or maintenance of normal sinus rhythm
  - 80 to 100 beats/min at rest
  - 90 to 110 beats/minutes minute with moderate exercise