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Department of Health Research
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INDIAN COUNCIL OF MEDICAL RESEARCH
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Standard Treatment Workflow (STW)

ATRIAL FIBRILLATION

ICD-11-BC81.31

WHEN TO SUSPECT ?

SYMPTOMS
- Rapid rate palpitations with or without
  - General fatigue or weakness or exhaustion
  - Dizziness, near syncope or syncope
  - Shortness of breath
  - Chest pain
- More marked on exertion

SIGNS
- Irregularly irregular pulse
- Variable heart sound

LOOK FOR RISK FACTORS
- Prior valvular heart disease or CHF or MI
- Prior TIA or stroke or embolic episode
- Hypertension, DM, COPD,CKD, Obesity

LOOK FOR PRECIPITATING FACTORS
- Post (cardiac) surgery
- Alcoholism or binge drinking
- Myo-pericarditis or ACS
- Pneumonitis or pulmonary embolism
- Sepsis, hyperthyroidism

MANAGEMENT PRINCIPLES
- Categorize AF
- Look for immediate intervention indicators
- Assess stroke risk & need for anti-coagulation
- Assess bleeding risk
- Need for rate control
- Consideration for rhythm control

CATEGORIZE AF
- Paroxysmal AF: Episodes of AF for less than 7 days
- Persistent AF: AF lasing from 7 days to 1 year
- Long standing perssistent AF: AF lasting for > 1 year
- Permanent AF: AF with heart rate control as only option

LOOK FOR IMMEDIATE INTERVENTION INDICATORS
- Systolic BP 90 mmHg, HR > 150 or <50/min
- Ongoing Angina
- CHF or TIA or stroke
- Major bleed on Oral Anti-coagulants

STROKE RISK SCORE

CHA_2DS_2-VAS_c	SCORE
- Congestive heart failure/LV dysfunction	1
- Hypertension	1
- Aged ≥ 75 years	2
- Diabetes mellitus	1
- Stroke/ TIA/ TE	2
- Vascular disease [prior MI, PAD or aortic plaque]	1
- Aged 65-74 years	1
Maximum Score	9

OAC if score >1

BLEEDING RISK SCORE

HAS-BLED	SCORE
- Hypertension i.e. uncontrolled BP	1
- Abnormal renal/ liver function	1 or 2
- Stroke	1
- Bleeding tendency or predisposition	1
- Labile INR	1
- Age (e.g. >65)	1
- Drugs (e.g. concomitant aspirin or NSAIDSs or alcohol	1
	9

Bleeding Risk High in score >3

CHOICE OF ANTI-COAGULATION
- Direct oral anticoagulants (DOAC)
  - Aim for INR 2-3
  - Assess risk of bleeding
  - Take measures to reduce/ modify risk of bleeding
  - VKA only if severe M.S or metallic valve

MEASURES TO REDUCE HIGH BLEEDING RISK
- Control SBP to less than 140 mmHg
- Avoid dietary indiscretions
- Avoid concomitant aspirin, anti platelets, NSAIDs
- Avoid alcohol
- Correct anemia

HEART RATE CONTROL

In all patients except hemodynamic instability	Beta blocker or calcium blocker or combination	BB ± digoxin in HF	Rate aim to be less than 110/ min

CONVERSION TO NSR

Hemodynamic instability	Uncontrolled symptoms despite HR control	Unacceptable rate control drug side effects	Patients' preference

MANAGEMENT

AT PHC/CHC
- Detailed clinical evaluation
- Basic investigations
- Careful ECG evaluation
- Start OAC
- Start Metoprolol/Diltiazem/Verapamil if HR >110/min & no evidence of CHF
- Refer if indicators for early intervention

AT DISTRICT HOSPITAL
- Admit if indicators of early interventions
- Immediate cardioversion after heparinization,if hemodynamic instability
- Manage precipitating factors if any
- Assess stroke, bleeding risk & coagulation parameters
- Detailed echocardiogram
- Start OAC (Oral Anticoagulant)
- Control HR by single drug or combination of BB & Ca Blocker

Refer HR uncontrolled or CHF or angina

AT TERTIARY CENTRE
- Re-assess clinical status, need and adequacy of OAC
- Start NOAC (Non-Vitamin K antagonist Oral Anticoagulants)
- Optimise management of underlying cardiac disease
- Stress life style and AF risk factor modification
- Assess need for rhythm control and discuss pros & cons
- Consider RFA in select patient

INVESTIGATIONS

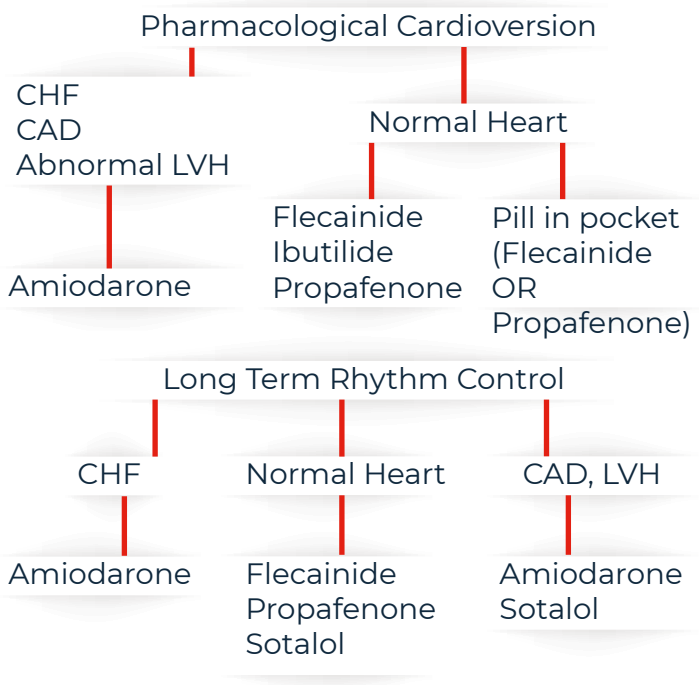
BASIC INVESTIGATIONS
- Hemograms
- Blood sugar, Creatinine
- Electrolytes
- 12 lead ECG

DESIRABLE INVESTIGATIONS
- Plain X-ray chest
- Thyroid evaluation
- Liver function test
- Troponins
- Prothrombin time, INR (Coagulation profile)
- Echocardiography

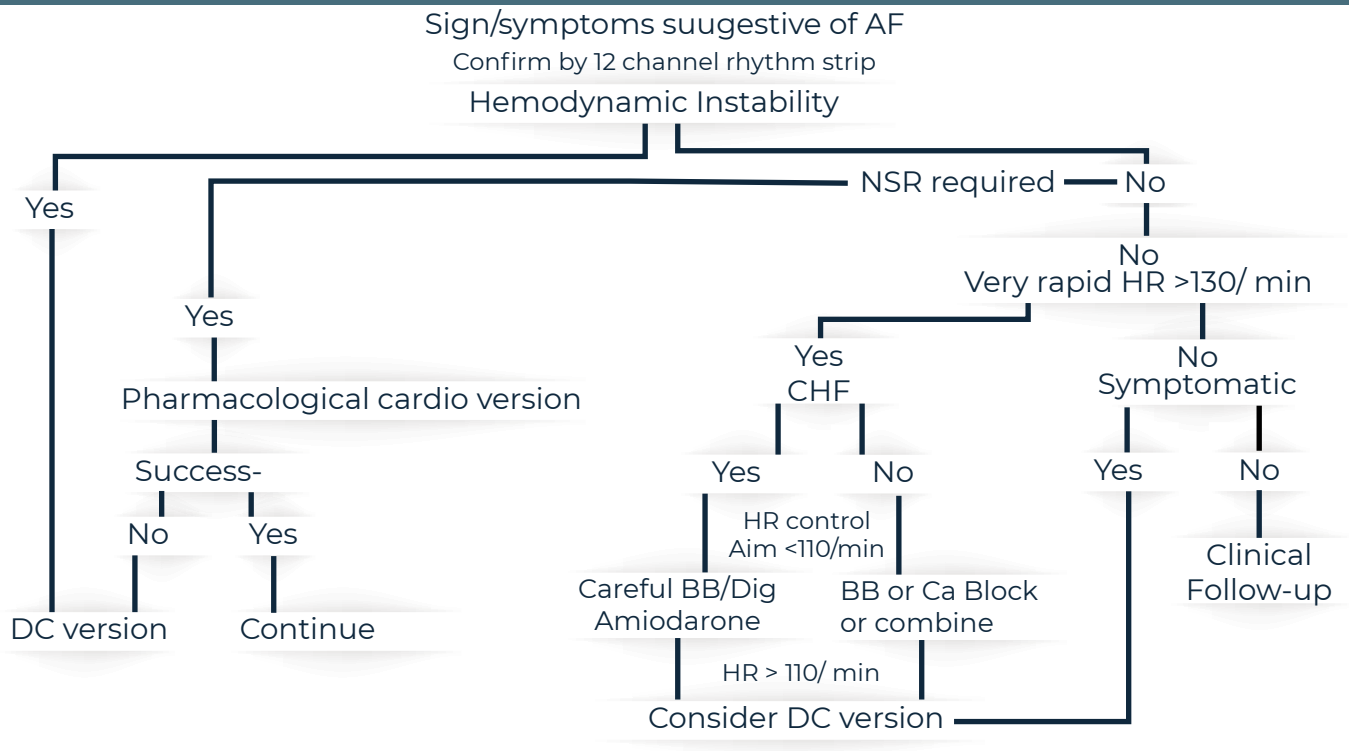
OPTIONAL INVESTIGATIONS
- Prolonged ECG monitoring
- Trans-esophagial echocardiography
- Exercise Stress Test
- CT scan
- MRI
- EP study
- Coronary angiography

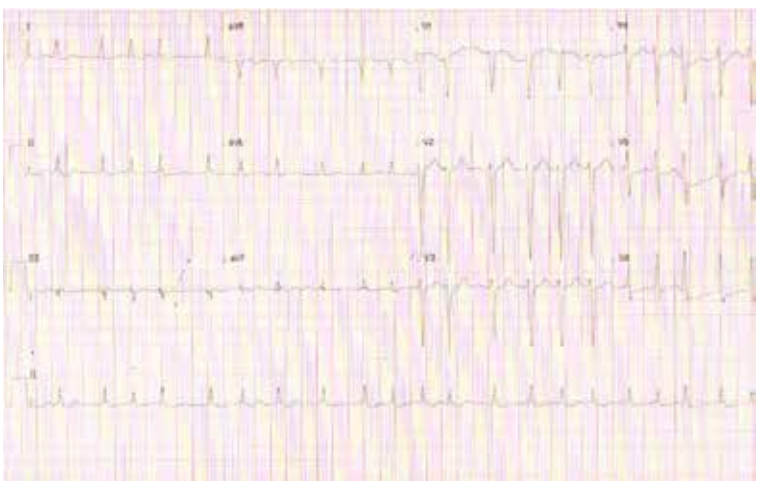
WHAT TO LOOK FOR IN ECG ?
- Ventricular rate
- Chamber enlargement
- Pre-excitation
- Prior MI
- Bundle branch block
- QT interval

RHYTHM CONTROL



MANAGEMENT ALGORITHM





Anti-coagulants in all Except
- Limited period with reversible etiology
- Score <2

REFERENCES

1. Joglar JA et al. 2023 ACC/AHA/ACCP/HRS guidelines for the diagnosis & management of AF: a report of ACC/AHA joint committee on clinical practice guidelines. 2024;149:e1-e156. doi:CIR.0000000000001193
2. VanGelder et al. 2024 ESC guidelines for the management of AF developed in collaboration with EACTS. European Heart J.2024:45,3314-3414

RESTORING RHYTHM, RESTORING FREEDOM

This STW has been prepared by national experts of India with feasibility considerations for various levels of healthcare system in the country. These broad guidelines are advisory, and are based on expert opinions and available scientific evidence. There may be variations in the management of an individual patient based on his/her specific condition, as decided by the treating physician. There will be no indemnity for direct or indirect consequences. Kindly visit our web portal (**stw.icmr.org.in**) for more information.