STANDARD TREATMENT WORKFLOW (STW)

Atrial Fibrillation

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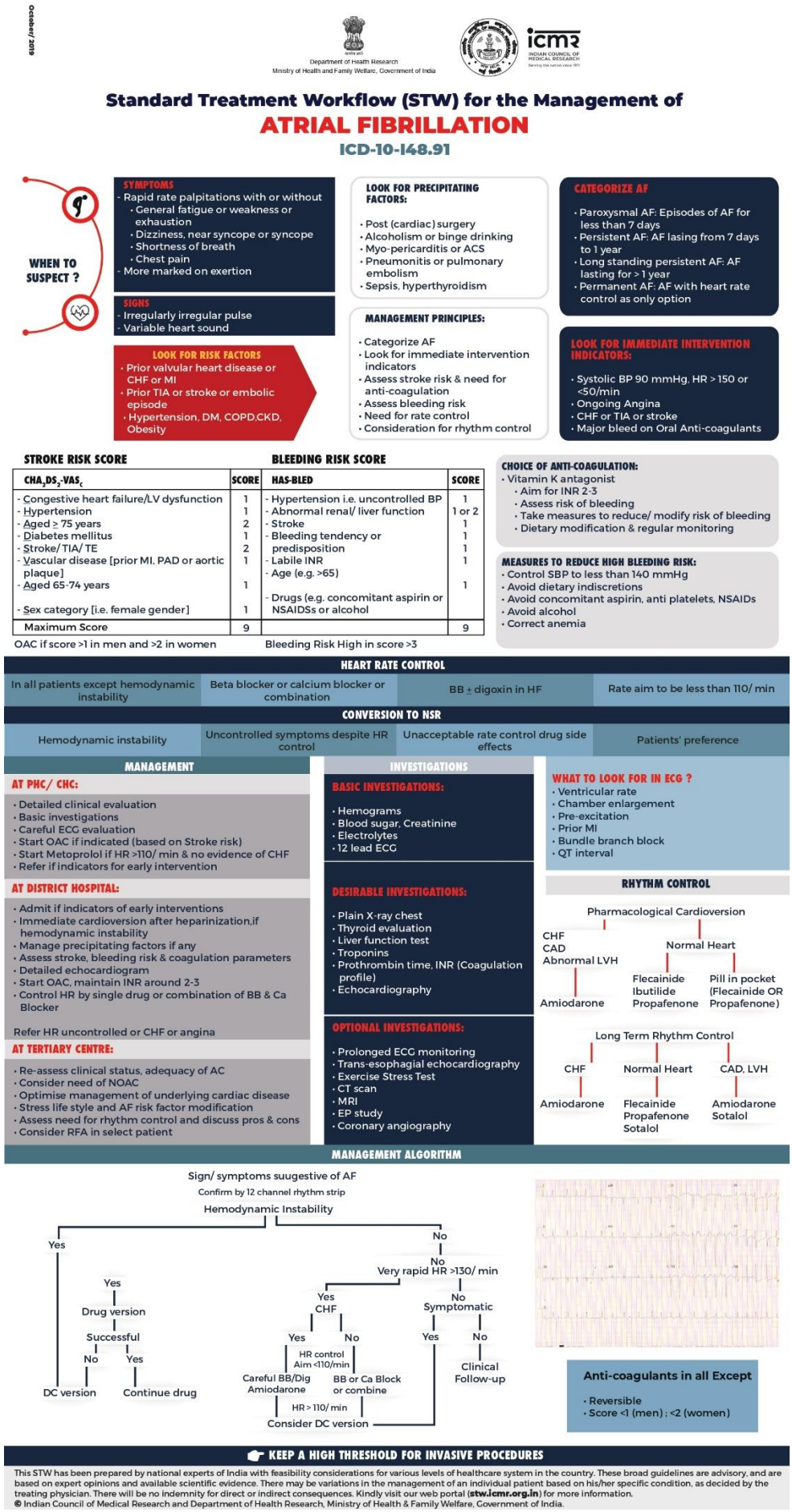
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Standard Treatment Workflow (STW) for the Management of
ATRIAL FIBRILLATION
ICD-10-I48.91
WHEN TO SUSPECT ?
SYMPTOMS
- Rapid rate palpitations with or without
• General fatigue or weakness or exhaustion
• Dizziness, near syncope or syncope
• Shortness 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 persistent 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
CHA2DS2-VASc
- 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
- Sex category [i.e. female gender] 1
Maximum Score 9
OAC if score >1 in men and >2 in women
BLEEDING RISK SCORE
HAS-BLED
- 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
Maximum Score 9
Bleeding Risk High in score >3
CHOICE OF ANTI-COAGULATION:
• Vitamin K antagonist
• Aim for INR 2-3
• Assess risk of bleeding
• Take measures to reduce/ modify risk of bleeding
• Dietary modification & regular monitoring
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 if indicated (based on Stroke risk)
• Start Metoprolol 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, maintain INR around 2-3
• 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, adequacy of AC
• Consider need of NOAC
• 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
Pharmacological Cardioversion
CHF
CAD
Abnormal LVH
Amiodarone
Normal Heart
Flecainide
Ibutilide
Propafenone
Pill in pocket (Flecainide OR Propafenone)
Long Term Rhythm Control
CHF
Amiodarone
Normal Heart
Flecainide
Propafenone
Sotalol
CAD, LVH
Amiodarone
Sotalol
MANAGEMENT ALGORITHM
Sign/ symptoms suugestive of AF
Confirm by 12 channel rhythm strip
Hemodynamic Instability
Yes
Yes
Drug version
Successful
No
Yes
DC version
Continue drug
No
No
Very rapid HR >130/ min
Yes
CHF
Yes
No
HR control Aim <110/min
Careful BB/Dig Amiodarone
BB or Ca Block or combine
HR > 110/ min
Consider DC version
No
Symptomatic
Yes
No
Clinical Follow-up
Anti-coagulants in all Except
• Reversible
• Score <1 (men) ; <2 (women)
KEEP A HIGH THRESHOLD FOR INVASIVE PROCEDURES
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.
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