Living with AFIB
Taking care of a loved one with AFIB
New Developments in the Treatment of AFIB

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Purpose of the talk

1. Inspire to pursue a productive life despite AFIB?
2. How to find comfort during a journey of AFIB treatment?
3. How to support and assist family members with AFIB?
4. How to identify people at risk for AFIB?
5. How to decide which treatment option is best for a particular situation?

3 case examples to be discussed…

Case 1: Mr. Smith

- Mr. Smith is a 64 years old male who noted palpitation
- Primary care doctor performed an EKG that revealed AFIB
- Mr. Smith comes to heart rhythm specialist to discuss the management options

Mr. Smith, 64 years old with AFIB in my Clinic

Questions of Mr. Smith

Why I had AFIB and not my buddy Jeff?

Can you get rid of my palpitation and restore normal rhythm?

Will it happen again? Can we prevent it?

Do I need a defibrillator or pacemaker?

Will I get a stroke?

What is ablation? My aunt had one.

Two Components of AFIB Care

1. SYMPTOMS Control
    1. Stopping palpitation, fatigue, tiredness and related symptoms
    2. Preventing heart from getting weak and symptoms of weak heart
2. Stroke Prevention
    1. Risk is NOT QUANTIFIED by the AFIB frequency
    2. Risk of stroke is NOT SAME in all patients with AFIB
    3. Not EVERYONE needs blood thinner
    4. Blood thinner LOWERS the risk of stroke

Two Components of AFIB Care are completely different topics

- Some people need
  - Only symptom control
  - Only stroke prevention
  - Both symptom control and stroke prevention
  - Nothing

Examples to follow

Symptom Control

AFIB Symptoms

- Palpitation (perception of heart beating fast, irregular, skipping beats)
- Effort intolerance, can be gradual over months and sometime years or abrupt over days
- If AFIB is associated with with fast rate, it can cause weakness of heart muscle - usually develops in months
- Symptoms of weak heart such as leg swelling, SOB with minimal activity, inability to sleep at night

Goal # 1- Symptom Control

- Bring to normal rhythm
  - Two ways
    - Cardioversion (using paddles or patches), 99.9% success
    - Medication (CCB,BB,AARx): 50 % successful
- Keep in normal rhythm, prevent recurrence of AFIB
  - Medications such as rhythm medications have 50-70 % chance of maintaining normal rhythm
  - Catheter ablation has similar success rate

Symptom Control

Options for Mr. Smith

Everyone deserves one attempt to restore normal rhythm.

- Mr. Smith felt better in normal rhythm. Symptomatic AFIB
- Unfortunately, he had a recurrence after 6 months and comes to clinic to discuss the options.
- Because Mr. Smith felt better in normal rhythm, it is reasonable to try something to keep normal rhythm.
- If he had no improvement in normal rhythm, it is not necessary to do anything to restore or maintain normal rhythm. JUICE ≠ Squeeze

Mr. Smith has AFIB recurrence

- Mr. Smith had two episodes of AFIB in 12 months and decided to start a medication to prevent AFIB.
- AFIB medications are of **TWO kinds**
- 1- Rate slowing medications: Beta blocker such as metoprolol or diltiazem or Cardizem
  - Most people with AFIB are taking one of the Rate slowing medications
- 2- Rhythm medication: Flecainide, Tikosyn, Amiodarone etc.
  - The goal is to choose a rhythm medication with minimal side effects and maximal efficacy for an **individual** patient

How to start a Rhythm Medication?

Requires a hospital stay

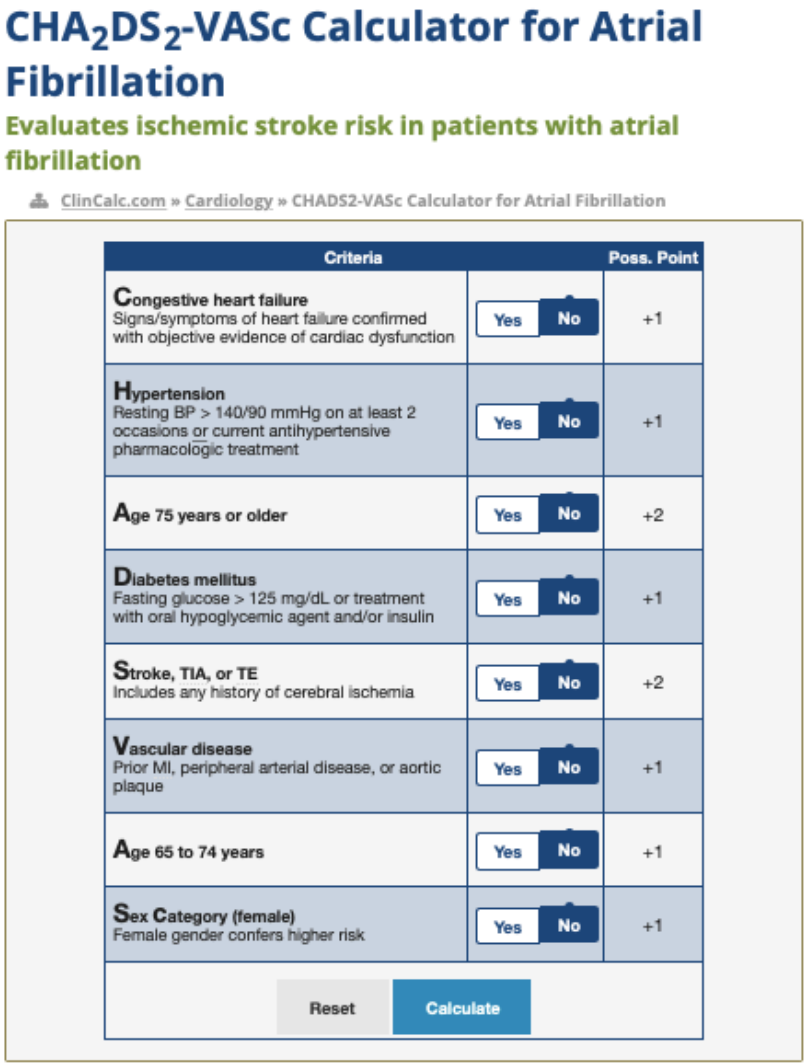
- All rhythm medications have small risk < 1 % of causing bad heart rhythms that can be dangerous
- Patients are monitored for first 5 doses (2 nights in the hospital)
- Some dose adjustment or medication change may be required during hospital stay
- If first 5 doses are tolerated, it is very safe to continue medication
- While on medications, some surveillance is needed, usually twice a year

Mr. Smith asks about stroke risk

Do I need a blood thinner?

- Currently, stroke risk is Not quantified based on the frequency or burden of AFIB
- Stroke risk is different for everyone and depends on other medical conditions and age
- Risk is quantified by a scoring system called CHADSVASC sore
- Anyone with CHADSVASC sore of 2 has 2 % risk of stroke per year. 98 % chances are that NOTHING will happen
-

Tool to Calculate Stroke Risk in AFIB Patients



What is Mr. Smith's stroke Risk?

RESULTS

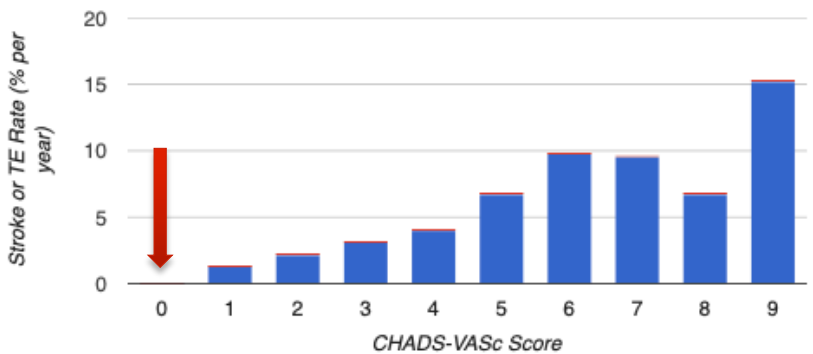
Total Points	Thromboembolism Risk	Thromboembolism Rate [1] (% per year, no aspirin)
0	Low Risk	0% (95% CI, 0% to 0%)

Antithrombotic Therapy Recommendation

Based on the 2012 ESC Guidelines, consider no antithrombotic therapy (class I, level B).[2]

Note that this recommendation is a generalization based on stroke risk. Patient-specific considerations, such as other uncontrolled risk factors for stroke and bleeding risk, should be considered on a case-by-case basis. The 2012 CHEST Guidelines do not provide recommendations for CHA_2DS_2-VASc.[3]

Save Image



Summary of care for Mr. Smith

64 years old with 2 symptomatic episodes of AFIB

- Symptom control
- Started on medication called Flecainide
- No blood thinner

After 2 years, no more episode of AFIB

Comes to clinic every year and goes to pharmacy clinic every 6 months for monitoring side effect of medication

Case # 2

Ms. Williams, 75 years old with first episode of AFIb identified during a routine EKG

- Again 2 components of AFIB care
  1. Rhythm control
  2. Stroke prophylaxis
- Denies any symptom
- A trial of cardioversion resulted in normal rhythm; however, no symptomatic improvement noted.
- Does she need rhythm medication or ablation: NO

Regardless of normal rhythm or AFIB, we needs to calculate the risk for stroke to determine the need of blood thinner.

Tool to Calculate Stroke Risk in AFIB Patients

Ms. Williams, 75 years

CHA_2DS_2-VASc Calculator for Atrial Fibrillation

Evaluates ischemic stroke risk in patients with atrial fibrillation

ClinCalc.com » Cardiology » CHADS2-VASc Calculator for Atrial Fibrillation

Criteria		Poss. Point
Congestive heart failure Signs/symptoms of heart failure confirmed with objective evidence of cardiac dysfunction	Yes / No	+1
Hypertension Resting BP > 140/90 mmHg on at least 2 occasions or current antihypertensive pharmacologic treatment	Yes / No	+1
Age 75 years or older	Yes / No	+2
Diabetes mellitus Fasting glucose > 125 mg/dL or treatment with oral hypoglycemic agent and/or insulin	Yes / No	+1
Stroke, TIA, or TE Includes any history of cerebral ischemia	Yes / No	+2
Vascular disease Prior MI, peripheral arterial disease, or aortic plaque	Yes / No	+1
Age 65 to 74 years	Yes / No	+1
Sex **C**ategory (female) Female gender confers higher risk	Yes / No	+1

Reset | Calculate

What is Ms. Williams stroke Risk?

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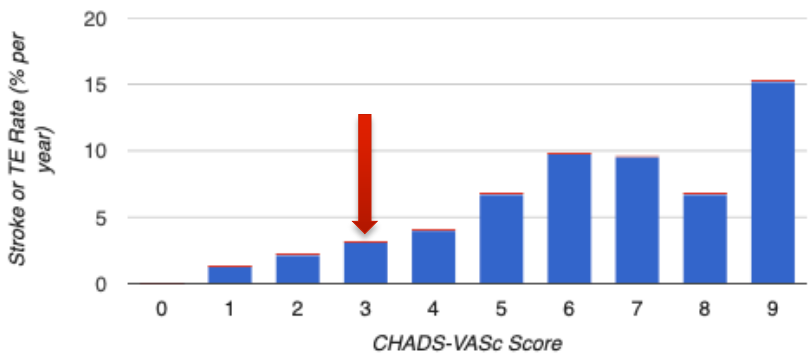

Summary of Ms. Williams care

Needs Blood thinner but no Rhythm medication

- She was managed with ONLY blood thinner due to high Risk of Stroke.
- No Rhythm medication or ablation was considered because she had NO symptom improvement in Normal rhythm.

Lets summarize two cases

- Mr. Smith had SYMPTOMATIC AFIB and Required rhythm control medications.
- His Risk of stroke is low so he does not need Blood Thinner

- Ms. Williams has ASYMPTOMATIC AFIB, thus DID NOT require medication for rhythm control.
- Her Risk of stroke is HIGH so she does need blood Thinner

Other Scenarios

Case # 3

- 78 years old female with Diabetes, Hypertension had frequent Symptomatic AFIB episodes.
- Had multiple cardioversions and three ablations. She is currently on Amiodarone but still has frequent episodes of AFIB during which her heart rate is > 120 BPM and results in fatigue and tiredness. What are her options.
- Symptom Control
- Stroke Prevention

Case # 3

Role of Pacemaker in AFIB

- Some patients with AFIB need pacemaker to allow continuation of medication because all AFIB medications have tendency to slow down the heart rate.
- In such patients, pacemaker works as a back up and is not used all the time.
- In some patients, rapid rate during AFIB can not be controlled with medications; there an ablation of the junction between upper and bottom chambers is done to avoid the risk of having fast heart rate.
- In these patients, pacemaker will be used all the time and pt is dependent on the pacemaker.

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- Symptom Control: AV junction ablation and pacemaker
- Stroke Prevention: Risk of stroke is high: Blood thinner is needed.

How and where ablation works?

Basis for various technologies in AFIB ablation

- Current understanding of AFIB origin…
- Ablation creates a barricade between the areas where AFIB starts and the left upper chamber
- The barricade can be created with radiofrequency energy that heats the tissue and causes a burn or cryo which causes freeze burn.
- The barricade may break over time needing repeat ablation.
- Often medication become more effective after ablation.

Does Ablation fail?

Depends

- Sometime the source of AFIB is inside the left upper chamber; therefore creating a barricade may not work
- Initially, most patients have source of AFIb inside the veins; therefore, ablation works best early on.
- If AFIB is left untreated for months to years, the success of medications and ablation diminishes.

Options for stroke prophylaxis

Options

- Warfarin- Can be monitored. About 40 % people have levels in the lower range
- Novel oral anticoagulants (Eliquis, Xarelto, Pradaxa) – Easy to take- No monitoring needed- expensive- cost varies based on Ablation
- Watchman: Seals the outpouching where blood clot forms and thus emancipated from the need of blood thinner.
- Watchman implant procedure is similar to ablation and has ~ 93 % chances of coming off of blood thinner

New Development in AFIB

Technology is evolving

- Various balloons and catheters
- No new mechanism has been identified
- All tools are equally effective if you know how to use them
- Selection is based mainly on the operator preference rather than the tool
- Variation in anatomy occasionally restricts the options.

How to prevent recurrence of AFIB

Ball is in your court

- AFIB is a sign of ageing heart for the most part
- Early onset of AFIB highlights some risk factors such as
  - Obesity – The effect is dose dependent
  - Sleep apnea with or without snoring –
  - Alcohol intake
  - Sedentary lifestyle
- The efficacy of medications and ablation is significantly improved with adequate control of Risk Factors

My Approach towards AFIB

Tiered approach

Identify the individual and unique risk factors in each patient

Restore normal rhythm and see if it improves symptoms

Start working on the risk factors

If patient feels better in normal rhythm, discuss options to keep in normal rhythm

Patients where I prefer medications over ablation

- Uncertain if the symptoms are related to AFIB
- Multiple other medical problems
- Unwilling to work on the risk factors
- Age > 80 years old
- Patients with existing pacemakers and defibrillators

Patients where I prefer Ablation over Medications

- Young patients
- No other medical problem
- Extremely symptomatic with AFIB
- Patients willing to lose weight, wear CPAP and quit drinking alcohol

Thank You