Major Bleeding in Chronic AF

Mohamed Oraby, MD
Professor and Head of Cardiology
Suez Canal University

Agenda

- Introduction
- Emergency management of Major Bleeding
- When and how to restart OAC ??

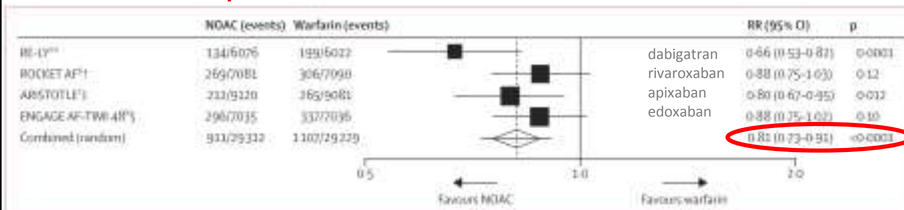
Table 1: Stroke and bleeding risk stratification with the CHA_2DS_2-VASc and HAS-BLED schemas

CHA_2DS_2-VASc	Score	HAS-BLED	Score
Congestive heart failure/LV dysfunction	1	Hypertension i.e. uncontrolled BP	1
Hypertension	1	Abnormal renal/liver function	1 or 2
Aged ≥75 years	2	Stroke	1
Diabetes mellitus	1	Bleeding tendency or predisposition	1
Stroke/TIA/TE	2	Labile INR	1
Vascular disease [prior MI, PAD, or aortic plaque]	1	Age (e.g. >65)	1
Aged 65-74 years	1	Drugs (e.g. concomitant aspirin or NSAIDSs) or alcohol	1
Sex category [i.e. female gender]	1		
Maximum score	**9**		**9**

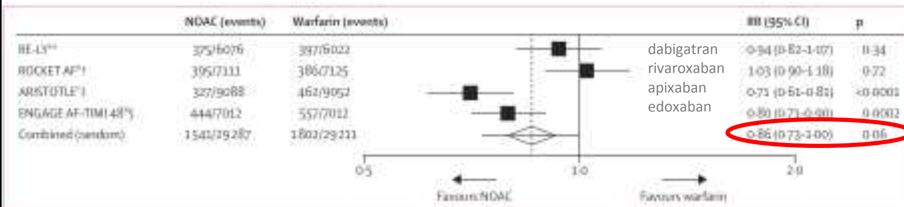
Meta-analysis shows significant 19% relative risk reduction in stroke/SE and strong trend towards less bleeding with full dose NOAC vs warfarin in NVAF

Pre-specified meta-analysis of all 71,683 patients

EFFICACY: Stroke or Systemic Embolic events



SAFETY: Major Bleeding



Major Bleeding

- In critical site
  - Nervous system
  - Eye
  - Pericardium
  - Muscular
  - Joints
  - Retroperitoneal
- Hemodynamic instability
- Hemoglobin drop > 2 gm%
- Need for transfusion

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Supportive Measures

- Stop anticoagulants and antiplatelets
- Fluid resuscitation
- Blood transfusion
- Control bleeding (if accessible)
- Tranxemic acid (anti-firinolytic)
- Anticoagulation lab. testing

Reversal of VKA

- Fresh frozen Plasma (FFP)
- Prothrombin coplex concentrate (PCC)
- Vit. K

FFP

- All needed clotting factors
- 3-4 units (10-20 ml/Kg)
- Short half life 6-8 hours
- Concomittent admin. of Vit. K
- Side effects
  - Volume overload
  - Acute lung injury

4-factor PCC

- 25 times higher concentration than FFP
- Rapid reversal of INR (15-20 minutes)
- Small volume (20-40 ml)
- Costy and may not be available

Vit. K

- 5-10 mg IV
- Drop INR 6-12 hours after IV

Reversal of DOACS

- Not usually needed (short half-life)
- Supportive measures
- Fresh frozen plasma has limited role
- Prothrombin complex concentrate can be used
- Charcol and gastric Lavage (2-4 H.)
- Hemodialysis for Dabigatran

Specific Reversal Agents

- Dabigatran .... (Idarucizumab)
- X-a inhibitors
  - Andexanet alfa
  - Aripazine

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Scenario

- 47 years old female patient with prosthetic mechanical valve in the mitral position and long standing AF on oral warfarin for 25 years
- Presented with large traumatic intracranial hematoma after motor car accident with INR > 5
- Warfarin stopped and patient managed conservatively

When would you restart anticoagulation after stabilization ??

1. Immediately after clinical stabilization
2. One-two weeks after stabilization
3. At least 8 weeks after stabilization
4. Never restart Warfarin again

Thrombotic versus Bleeding risk

Arguing for resuming anticoagulation

Strong or near-absolute indication for anticoagulation
- Mechanical mitral valve
- Hypercoagulable state
- $CHADS_2$ score > 5 (see TABLE 2)
- CHA_2DS_2-VASc score > 6 (see TABLE 2)

Arguing against resuming anticoagulation

No absolute indication for ongoing anticoagulation

Near completion of planned anticoagulation course

High risk of rebleeding or presence of additional risk factors for bleeding

Anticipated high risk of morbidity or death if rebleeding occurs

Factors Considered In ICH

- 1st time or recurrent
- Spontaneous or traumatic
- Lobar or non-lobar
- INR at the event
- Correctable factors (HTN, NSAIDs, labile INR)
- VKA or DOACs

Concensus

- Low-dose prophylactic UFH can be started as early as 72 hours after stabilization.
- In high thrombotic risk (mechanical MV) full anticoagulation better resumed after 2 weeks with close CT monitoring
- Therapeutic UFH is preferred as starting
- DOACs are associated with lower IC bleeding risk compared with VKA

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Thank You