20-year trends of characteristics and outcomes of stroke patients with atrial fibrillation

“Athens Stroke Registry”

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Atrial Fibrillation

- >12% incidence increase the last decades
- >15 millions in USA until the end of 2050

Greater than 7% in patients older than 65

Greater than 10% in patients older than 75


Atrial Fibrillation

- 5-fold increase of stroke
- mortality
- Functional outcome
- High rate of recurrence


Report the overall, age- and sex-specific secular trends of...

- Characteristics and outcomes of patients with acute ischemic stroke and atrial fibrillation
- The antithrombotic treatment used in primary and secondary prevention

...during the two-decade period between 1993 and 2012 in the Athens Stroke Registry.
Methods

- “Athens Stroke Registry” : from 1993 to 2012, patients with acute stroke admitted in the Acute Stroke Unit of the University Hospital Alexandra

- AF diagnosis:
  - Admission ECG
  - 24h ECG Monitoring
  - Holter 24h

- Assess the annual percentage changes based on sex and age
  - Joinpoint regression analysis, Kim’s Method
    Joinpoint Regression Program (Version 4.4.0.0-January 2017; Statistical Methodology and Applications Branch, Surveillance Research Program, National Cancer Institute)
During 1993-2012
- 3314 patients admitted with acute ischemic stroke
- AF in 1044 (31.5%) of them

Results

-0.8% (95% CI: -1.5, 0.0%)
Results

trends of AF characteristics

➢ In 1044 AF patients:
  ➢ 110 (10.5%) diagnosed on admission
  ➢ 197 (18.9%) during follow up
Results  

trends of antithrombotic strategies on admission

- 718 known AF
- 25.9% treated with ASA
- 25.6% treated with anticoagulants
- 49.3% untreated

6.4% (95%CI: 1.2-11.9%)

-2.4 (95%CI: -1.2, -3.6%)

2.3% (95%CI: -0.4, 5.0%)
Results

trends of antithrombotic strategies at discharge

- 883 patients discharged
- 49.3% treated with anticoagulants
- 31.9% treated with ASA
- 5.5% combination of ASA and anticoagulant
- 13.2% untreated
Results
trends of antithrombotic strategies at discharge

- 883 patients discharged
- 49.3% treated with anticoagulants
- 31.9% treated with ASA
- 5.5% combination of ASA and anticoagulant
- 13.2% untreated
883 patients (84.6%) follow up of 29.4 months

- 2162 patient years
- 6.7/100 py Stroke recurrence
- 9.6/100 py major Cardiovascular events
- 16/100 py Death

Results trends of outcomes

- 62.3%
- 35%
- 42.4%
Conclusions

➢ Improvement of antithrombotic treatment at discharge as more patients are treated with anticoagulants

➢ Improvement of AF detection, evident by the increasing number of patients with newly diagnosed AF

➢ Improvement on antithrombotic strategy of AF patients in the setting of secondary as well as primary prevention

➢ No major differences in all age and sex groups
Conclusions

...these improvements result in a significant decrease

- Stroke recurrence (RR 62.3%)
- Cardiovascular events (RR 35%)
- Death (RR 42.4%)
But still...

➢ Between 2007-2012, significant percentage of the AF patients weren’t treated with anticoagulants (19.8%)

... it’s a long way to ...

Stroke prevention
thanks to teamwork...