The Status of Clinical Cardiovascular Research in China

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China is Changing the World

- GDP now ranks 2nd in the world
- Factory of the world: “made in China”
- However, innovation and research work is essentialy from “made in China” to “made with China”
Clinical Practice of Cardiology in China

- Clinical practice of cardiology is keeping pace with leading countries in China.
- All current techniques and strategies in cardiology are adopted in China as well as developed countries.

**Coronary Stents inserted**

- 2004: 40,000
- 2009: 360,000

**AF ablation procedures**

- 1998: 11
- 2004: 1,053
- 2009: 9,000
Clinical Practice of Cardiology in China

Registry of Elderly AF pts. In Beijing
AF Antigoaculant Therapy

Incidence of major complications of AF ablation procedures

Registry data of Huang CX et al JACC,2009,53:1798  Ma CS.Unpublished data
What About Clinical Research?

• High quality clinical practice is only essential, but not sufficient for advanced clinical medicine.

• Still a big gap exists between large clinical resource and academic contribution, just like the long journey on Great Wall.
Search Criterion

- Original article with corresponding author in mainland China
- Clinical research: conducted directly at the epidemiology, diagnosis, and treatment of CVD in pts
- Exclusion
  - Basic research in vitro
  - Animal experiments
  - Molecular and cell research although using pts specimen
- Search in PubMed
Clinical Researches by Chinese Physicians Published on Leading CV Journals

- NEJM: 3
- Lancet: 1
- JAMA: 2
- BMJ: 1
- Circulation: 15
- JACC: 16
- EHJ: 7
- Stroke: 4
- Diabetes: 1
Distribution of specialties

- RFs: 22
- CAD: 10
- EP: 7
- AA: 4
- HF: 2
- VHD: 3
- CHD: 1
- PAH: 1
Institutes of Corresponding Authors

- Fuwai Hosp.: 13
- Anzhen Hosp.: 5
- Fujian Union Hosp.: 4
- PLA general Hosp.: 3
- Xijing Hosp.: 3
- China-Japan Friendship Hosp.: 2
- CDC: 2
- SIBS: 2
- Other 18: 1
Regional Distribution

Beijing 27
Jiangsu 2
Shaanxi 3
Fujian 4
Shanghai 5
Summary

• A sharp increase of research work published on leading CV journals by Chinese physician in the past decade, especially in the last 5 years
• CV research in China remains in a data-accumulated phase, and more innovative work is relatively scarce
  - Epidemiological studies covered the largest proportion
  - Research into clinical therapeutic strategy starts to increase
  - Lack of drug & device innovation
Number of Clinical Trials Registered: All over the world

Clinicaltrials.gov
Number of Clinical Trials Registered: East Asia

- Clinical trials are increasing rapidly in all regions
- China (mainland) ranks 2nd in 2011 compared with 4th in 2008
Number of Clinical CV Trials Registered in China (Mainland)

- CV, 805, 32%
- Other, 1702, 68%

Bar chart showing the number of trials for various conditions:
- CAD: 369
- HTN: 129
- PAD: 115
- EP: 57
- HF: 33
- CHD: 17
- CM: 14
- VHD: 12

Clinicaltrials.gov
Unsolved Clinical Problems in Chinese Pts

• Epidemiological data of major CVDs and related conditions in China
• Drug safety and effectiveness in Chinese population
• Evidence of CVD management based on Chinese population
• Drug and device innovation with independent intellectual property rights
• CVD management model innovation
Registry of Eldly AF Pts in Beijing

- Age ≥65y, FU every 3 mon
- 2 cohorts matched by propensity scores
  - Ablation: Consecutively enrolled in Anzhen hospital
  - Conservatively treated: Convenience sampling in 6 hospitals
- Endpoints
  - Primary endpoints: Composite endpoint of total mortality, stroke and peripheral embolism
  - Secondary endpoints: Major bleeding and QoL
Construction of AF cohort in Beijing

- Registry of 10,000 NVAF pts from 22 hospitals
- FU ≥ 6 mon
- Aims at unsolved problems in Chinese AF pts
  - Risk assessment scheme for thrombo-embolism
  - Optimal anticoagulant intensity
  - Safety and effectiveness of AADs
  - Comparation of AADs and catheter ablation
  - Strategy for CAF management
Thank you!