Journey of an Interventional Cardiology

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Personal Journey of an Interventional Cardiologist

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Timeline

Case presentations → Comment on other peoples data → History of

Data presentations → Career advice → Golf/fishing/grandkids
“Grandma were you around when the dinosaurs died?”
Mevsim Denktas Age 4, 2006

“Ali, would you be able to present the journey of interventional cardiology?”
Ahmed Magdi, 2018

Outline

• Historical perspective of the field
• What happened in my lifetime
• How does the future look?
Once Upon a Time

- 3000 BC Egyptians performed bladder catheterization using metal tubes.
- 1844 Bernard coins the term "cardiac catheterization" and uses catheters to record intracardiac pressures in animals.
- 1929 Frossmann first documented human cardiac catheterization.

- 1956 Forssmann, Cournand and Richards share the Nobel Prize. Cournand states in his acceptance speech "the cardiac catheter was...the key in the lock."
- 1958 The diagnostic coronary angiogram selective imaging of the heart is discovered by Dr. Mason Sones.
1964

- Transluminal Angioplasty is introduced by Dr. Charles T. Dotter.

1966

- 1967 — Introduction of the Judkins Technique of coronary angiography
1974

• First peripheral human balloon angioplasty
• Andreas Gruentzig

• 1975 — First ASD closure percutaneously at Ochsner Clinic in New Orleans
Andreas Gruentzig performs first cath lab PTCA on awake patient in Zurich
1985

• 1985 — A year of loss in the history of interventional medicine: Dotter, Sones, Judkins and Gruentzig all pass away

1994: the PALMAZ-SCHATZ® Balloon-Expandable Stent approved by the FDA
1994-2003

- Stent thrombosis
  - 1997 Colombo et al. High pressure and Ticlopidine+ASA
  - 1998 ASA+Ticlopidine better than ASA alone or ASA+Coumadin
- Restenosis
Study protocols generally used 4 weeks, 1 month, or 6 weeks of treatment

2002

• 2002 — the 25th anniversary of the first angioplasty performed in an awake patient
• 2002 — First TAVR
• 2003 — the first drug-eluting stent, the Cypher, manufactured by Johnson&Johnson /Cordis, is approved by the FDA
• 2004 — Boston Scientific gets its Taxus drug-eluting stent approved
2002-2004: EME and FDA approval of Cypher and Taxus DES in Europe and USA

Most Important

patient
The Niche

- Why are you different?
- Why should you be different?
- How can you be different?

Procedures

- Know what you’re doing
- Write down the new procedures as you learn
- Use checklists
Present Future

- Coronary
  - Robotics
  - More complex
  - CTO
  - Bifurcation
  - Coronary physiology
- Structural
  - Aortic, Mitral, L atrial space, Defects

Future already here

- Alternative access
  - Radial (same day discharge)
  - Trans caval, Carotid, antegrade
  - Transseptal
- Other areas
  - LV and RV support devices
  - Peripheral
  - Veins
The Goal of the Profession

• Should be to make us obsolete.

Final Words

• The field of interventional cardiology have evolved within a lifespan of a human being
• We have lived through the most exciting era together
• However, we should never repeat the words attributed to Charles Holland Duell
• “Everything that can be invented has been invented.”
• However, he in fact said in 1902: “In my opinion, all previous advances in the various lines of invention will appear totally insignificant when compared with those which the present century will witness. I almost wish that I might live my life over again to see the wonders which are at the threshold.”

Thank you