PAD Treatment: Changing Roles of Medicine, Intervention and Surgery

Matthew George, M.D.
AnMed Vascular
Under Accreditation Council for Continuing Medical Education guidelines, disclosure must be made regarding financial relationships with commercial interests within the last 12 months.

Matthew George, MD

I have no relevant financial relationships or affiliations with commercial interests to disclose.
HOW TO TURN ON A GUY

HOW TO TURN ON A GIRL
OBJECTIVES

• Explain brief history of origin of vascular treatments
• Describe the transition of treatment strategies
• Discuss current treatment paradigm
I AM YOUR FATHER

NOOOOOO........... !!!
Medical Therapy

- Fritz Bruening 1923 Sympathectomy for hypertension control
- 1947 pentaquine
- Duiril (chlorothiazide) 1958
- Captopril 1975 (FDA 1981)
- aspirin
  - Hippocrates willow bark powder
  - Edward Stone 1763 salicylic acid
  - Charles Frederic Gerhardt 1853 acetylsalicylic acid
  - Bayer Aspirin 1897
  - John Vane 1960-70’s aspirin basic mechanism
  - Peter Sleight 1970’s effects on circulation and stroke
- Statins
  - Akira Endo 1971
  - lovastatin 1978 (Mevacor 1987)
Open vascular surgery

- Antyllus 2nd Century A.D. tries to ligate abdominal antic aneurysm
- William Harvey 1628 *Exercitatio Anatomica de Motu Cordis et Sanguinis in Animalibus*
- Rudolph Matas 1923 first successful ligation of aortic aneurysm
  - 1888 endoaneurysmorrhapy of brachial artery aneurysm
- Alexis Carrell 1912 vascular anastomosis
- Carrell and Kunlin 1948 Saphenous vein grafts
- Dubost, Debakey etc 1950’s open treatment of AAA
- Arthur Voorhees 1952 Vinyon-N synthetic aortic graft
- Oscar Creech 1966 Endoaneurysmorrhaphy
- 1975 first Gor-tex bypass graft used
Interventional

- Egas Moniz 1927 first angiogram (cerebral)
- Reynaldo Cid dos Santos 1929 Aortogram
- Werner Forssmann 1929 cardiac catheterization
- Seldinger 1953
- F. Mason Sones, Jr 1958 first selective heart catheterization
- Charles Dotter 1964 Balloon Angioplasty 1983 stent
- Gruentzig 1977 coronary PTA
- John Simpson 1984 atherectomy (1987 FDA approval for peripheral)
- Puel and Sigwart 1986 first coronary stent
- Parodi 1990 first endovascular stent for AAA
Sub-specialization of medicine

- 1949 - 26 approved residencies and fellowships (ACGME “Green pages”)
- 1977 - 35 specialties
- 1984 - 37 specialties
- 2007 - 122 specialties - 5 subspecialties -
  - 208 VS, 149 IR, 279 car
- 2008 - 122 specialties - 6 subspecialties -
  - 215 VS - 6 VSI, 171IR, 285 car
- 2016 - 146 specialties - 8 subspecialties -
  - 235 VS - 236 VSI, 281 IR, 312 car
Training and Experience Trends in Peripheral Vascular Disease

WE HAVE NO IDEA
WHAT WE'RE DOING
Current Encounters

- **Office Visits**
  - PAD: 161
  - CAROTID: 25
  - ANEURYSM: 112
  - Visceral: 19
  - Total: 1,011

- **Diagnostic**
  - PAD: 160
  - CAROTID: 60
  - ANEURYSM: 47
  - Visceral: 1

- **Intervention**
  - PAD: 466
  - CAROTID: 25
  - ANEURYSM: 2
  - Visceral: 218

- **Open**
  - PAD: 446
  - CAROTID: 160
  - ANEURYSM: 47
  - Visceral: 112

- **Current Encounters**
  - Total: 16
Workflow

- Patients evaluated: 62%
- Diagnostic procedures: 17%
- Interventions: 16%
- Open procedures: 5%
Actual Workflow

- Open: 2%
- Diagnostic: 9%
- Intervention: 8%
- Office: 30%
- EMR: 51%
225-8671

Dr. Matthew George
Dr. Louis Knoepp
Dr. Jennifer Thomas