HOW I SEE THE FUTURE OF CAS
FRANK J. VEITH
MEET - 2015
NICE – JUNE 9, 2015
THE SHORT ANSWER IS THE FUTURE IS BRIGHT
DESPITE CURRENT LEVEL 1 EVIDENCE THE OUTLOOK FOR AN UPSURGE IN CAROTID STENTING (CAS) IS BRIGHT & THEREFORE WE ARE READY FOR THE NEXT BREAKTHROUGH
I HAVE NO FINANCIAL CONFLICTS ALTHOUGH I HAVE LOTS OF **BIASES**
DESPITE SOME OPINIONS TO THE CONTRARY
C**AROTID STENTING OR CAS** IS CURRENTLY IN DECLINE GENERALLY FOR TREATMENT OF SYMP & ASYMPTOMATIC CAR STENOSIS THIS IS BECAUSE...
WITH SYMPTOMATIC CAROTID STENOSIS PATIENTS

RECENT RCTs* & POPUL STUDIES SHOW HIGHER STROKE RATES WITH CAS THAN CEA, AND...

*(CREST, ICSS, ETC)
WITH MOST ASYMPTOMATIC CAROTID STENOSIS PATIENTS

BEST MEDICAL TREATMENT HAS SUCH LOW STROKE RATES THAT IT MAKES MOST CAS (& CEA) UNNECESSARY
ANNUAL STROKE RATE WITH ASX CS DECREASED DUE TO BETTER BMRx & STATINS FROM 3-6% TO <1% / YR

FROM A ABBOTT & R NAYLOR
HOWEVER, I BELIEVE OUTLOOK FOR CAS IS BRIGHT BECAUSE 3 ADVANCES MAY DECR STROKES, IMPROVE CAS RESULTS & MAKE CURR RCTs OBSOLETE

1. BETTER EMBOL PROTECT DEVICES WITH CESS/REVERSAL OF FLOW
2. CERVICAL ACCESS (SILK ROAD SYSTEM) TO AVOID THE AORTIC ARCH & REV FL
3. MEMBRANE OR MESH COVERED STENTS TO STOP DELAYED STROKES
OUR 1995 EX VIVO MODEL OF CAS
Endovascular Bath
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More than 70% of events after CAS occur after the procedure.
DEBRIS THOUGH STENT CAUSING DELAYED EMBOLI
A MESH COVERED STENT TO PREVENT DELAYED EMBOLIZATION

Dual layer micromesh design for sustained embolic protection.

ROADSAVER FROM TERUMO
THE THREE MICROMESH CAROTID STENTS

From Max Amor
CGuard™ carotid embolic protection technology with MicroNet™ by InspireMD
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SILK ROAD CERVICAL ACCESS SYSTEM WITH REVERSAL OF FLOW

Following Slides Courtesy Of Chris Kwolak & Sumaira Macdonald
A NEW, SURGICALLY-INSPIRED ENDOVASCULAR SOLUTION

ENROUTE™ Transcarotid Stent and Neuroprotection System

Blood flow is reversed from the common carotid artery

Shorter delivery system and wires for simplified setup and delivery

Dynamic Flow Controller Hi / Low / Off

Blood flow is returned to femoral vein

Embolic filter (200µ)

CAUTION: Investigational device. Limited by federal (USA) law to investigational use. The ENROUTE™ Transcarotid Stent and Neuroprotection Systems bear the CE mark of conformity and are available for sale in EU and EFTA countries.
## SURGICAL OUTCOMES IN STROKE REDUCTION

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<th>Silk Road Clinical Studies</th>
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FOR SYMPTOMATIC & ASX PTS
IF THESE 3 ADVANCES
DECREASE CAS STROKE RATES

CAS WOULD BE MORE
COMPETITIVE TO CEA
& WOULD REPLACE CEA
MORE WIDELY
THAN IT DOES NOW
FOR ASYMPTOMATIC PATIENTS THERE ARE PROMISING WAYS ON THE HORIZON TO SELECT THOSE AT HIGH RISK OF STROKE

1. TCD DETECTED MICROEMBOLI
2. DUPLEX PLAQUE EVALUATION
3. MRI & CT PLAQUE EVALUATION
4. SILENT MRI & CT INFARCTS

SOME ASX PT GROUPS HAVE >12% PER YEAR STROKE RISK vs <1%
THESE HIGH RISK ASYMPTOMATIC PTS SELECTED BY THESE METHODS CLEARLY WOULD BENEFIT FROM CAS OR CEA - IN ADDITION TO BEST MEDICAL TREATMENT THUS INCREASING THE NUMBER OF PATIENT NEEDING CAS
HOWEVER THERE IS 1 RESERVATION:

THAT IS
THE EFFICACY OF THESE 3 METHODS FOR DECREASING CAS STROKE RATES & IMPROVING ASX PATIENT SELECTION MUST BE PROVEN BY APPROPRIATE CLINICAL TRIALS
MY CONCLUSIONS

1. DESPITE THIS RESERVATION I BELIEVE THE OUTLOOK FOR CAROTID STENTING OR CAS IS BRIGHT IN THE FUTURE
2. ALL VASCULAR SPECIALISTS SHOULD PREPARE FOR IMPROVING CAS RESULTS
THANKS FOR YOUR ATTENTION
**THE SILK ROAD PROCEDURE**

- **Surgically Inspired - It’s All about stroke**
  - Direct carotid access with CCA clamp & vessel control
  - Robust flow reversal akin to backbleeding
  - No discrimination – macro and micro emboli

- **Transcarotid Endovascular Advantage**
  - Procedural speed and interventional device control
  - Shorter delivery system and wires for simplified setup and delivery
  - Broad population of patients eligible for this procedure

- **Patient Friendly, Less Invasive Procedure**
  - Reduced rate and severity of cranial nerve injury
  - Local anesthesia can improve recovery time
  - Cosmetic result of a less invasive procedure

*ROADSTER Study to be presented at VIVA and VEITH, 2014*