The Argument Against Routine Duplex Ultrasound After Truncal Ablation: An Evidence-Based Cost-Benefit Analysis

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DISCLOSURES
RELEVANT TO THIS PRESENTATION

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INCIDENCE OF VTE WITH ENDOVENOUS THERMAL ABLATION

DVT in 12/73 limbs (16%) 
extension of the occlusive clot filling the treated proximal GSV segment as a floating tail beyond the patent inferior epigastric vein into the common femoral vein (CFV).” Hingorani A. (2004)

3/39 cases (7.7%) with thrombus extension into the common femoral vein & a temporary IVC filter was placed in one” Mozes G et al. J Vasc Surg 2005;41:130-5

BOTH SERIES SMALL POPULATIONS
STATISTISCAL PROBLEM
CAN LEAD TO AN OVERESTIMATION OR UNDERESTIMATION OF THE INCIDENCE

NOW ROUTINE POST EVA DUPLEX SCREENING
COMMON PRACTICE IN THE U.S.
THE CONTINUED RISE OF EVA

A HIGH VOLUME PROCEDURE

SVS/AVF Guidelines*
“SUGGESTS”

Perform Duplex US within 48-72 hours after EVA to rule out thrombotic complications. (GRADE 2; LOE C)


DUPLEX FUNCTIONS AS A SCREENING TEST AFTER EVA

A test designed to identify and eliminate those who are not affected by a disease

IDEAL SITUATION FOR A SCREENING TEST

- The condition has serious consequences
- The Rx of the asymptomatic condition is better than in the symptomatic patient
- The prevalence of the condition is moderately high.


Systematic Analysis of Randomized Controlled Trials (RCTs) of EVAs*

VTE with EVA ?

12 RCTs Included

371 RFA LIMBS
1111 EVLA LIMBS

1482 LIMBS

KABNICK CLASSIFICATION OF ENDOVENOUS HEAT INDUCED THERMAL INJURY (EHIT)

CASE SERIES (> 150 PATIENTS)

RFA  
( N = 1,379 LIMBS)

EVLA  
( N = 10,984 LIMBS)

COMBINED WITH RCTs  
13,845 LIMBS

INCIDENCE OF VTE  
13,845 LIMBS # (%)

DVT  
28 (0.2)

PE  
27 (0.19)

100  
(0.72)

EHIT  
72 (0.5)

COST OF SCREENING 300,000 PATIENTS  
FACTORS & ITEM COST

• Cost Of LMWH ($626) for 10 days → $626

• Cost of Second Scan → $106.71

• False Positive Studies → (3% Incidence) $5 of Rx + Comp

COMPLICATIONS OF Rx

• Cost of Major Bleed (1% INCIDENCE) → $7673

• Cost of HITT (0.174% INCIDENCE) → $34,155

COST OF FALSE POSITIVES  
3% X 1,555,733 = $46,672

TOTAL COST  
$1,555,733
**Our Suggestions**

- Current guidelines should be revised
- Increase the yield of the Screening study
- Use of risk assessment tools (i.e. Caprini score) to identify patients that will benefit from Screening duplex US and DVT prophylaxis
- Varicose Vein Registry ® for the VQI – 320 centers in 46 states