

Value Of Duplex Gray Scale In Predicting Successful SFA CTO Crossing, Re-Entry And The Need For Distal Access

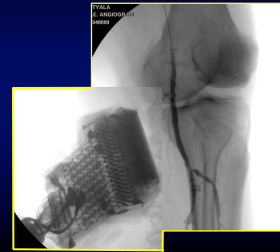


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No disclosures

The Vascular Institute of New York®

Duplex-Guided Balloon Angioplasty



Duplex - Guided Subintimal Dissection



Duplex - Guided Balloon Angioplasty

Results

- Technical success 517 / 544 (95%)
- ★ Stenoses 380 / 381 (99.7%)
- ★ Occlusions 142 / 163 (87%)*

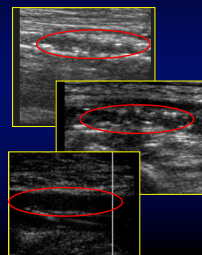
* P < 0.0001

Failure to Reenter Popliteal Artery

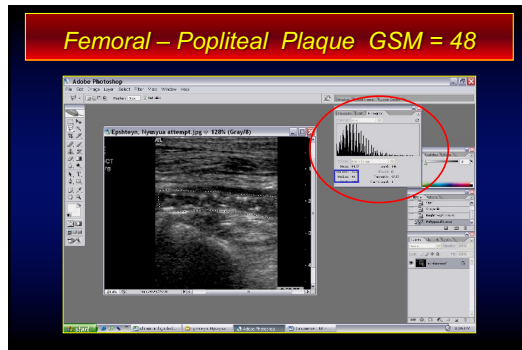
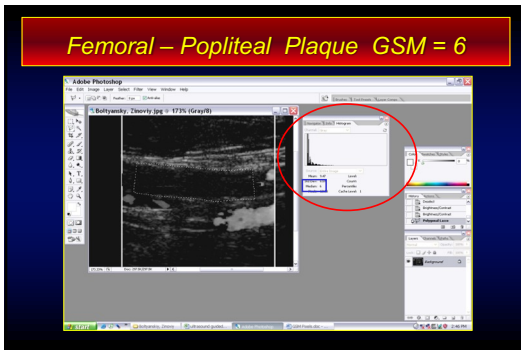


Plaque Echogenicity Quantification

Gray Scale Median = GSM



- Gray scale US
- Distal 2 cm prior to reentry
- Photoshop CS2[®] histogram
- Normalized & Digitalized
- Linear scale 0 to 255
- Adventitia → 185 to 195
- Blood → 0 to 5



- Duplex - Guided Subintimal Balloon Angioplasty**
- Overall plaque GSM 22.5 ± 12.6 (3 to 60)
 - Successful cases (99) 18.4 ± 7.8
 - Failed reentry (17) $46.4 \pm 8.1^*$
- * P < 0.0001*

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Predictive value of plaque GSM

GSM	N (Total)	N (Success)	Success rate
≤ 25	82	82	100 %
> 25	34	17	50 %
> 30	24	7	29 %
> 35	19	2	10 %
> 40	12	0	0 %

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GSM and Risk Factors

Risk Factor (+/-)	Mean GSM (+)	Mean GSM (-)	P value
Tobacco (46/70)	21.7 ± 10	23 ± 14.1	0.59
DM (64/52)	23.3 ± 13.5	21.5 ± 11.4	0.45
CRI (52/64)	22.7 ± 13.2	22.4 ± 12.2	0.9
HD (8/108)	36.8 ± 17	21.7 ± 12	< 0.002

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POPLITEAL OR TIBIAL RETROGRADE ACCESS ???

Thank You