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Vascular Medicine

Jeffrey!
You detect a loud right carotid bruit in a 39 yo woman. It does not abate with neck compression. She has no atherosclerotic risk factors and is otherwise healthy. Remaining examination is WNL. A carotid duplex US is normal.
What is the most likely etiology of her right sided systolic bruit?

A. Temporal (giant cell) arteritis 25%
B. Aortic stenosis 25%
C. Venous hum 25%
D. Fibromuscular dysplasia 25%
The United States Registry for Fibromuscular Dysplasia
Results in the First 447 Patients

- 91% female
- 95% white
- **Most common manifestations:** HTN, headaches, pulsatile tinnitus, dizziness
- **Other complications:** dissection, aneurysm, transient ischemic attack, and stroke

Fibromuscular Dysplasia

• In contrast to typical atherosclerotic disease of the bifurcation/proximal ICA, FMD typically affects the mid/distal ICA

• Obtain CTA/MRA/DSA if suspicious of FMD
What is the next step in this patient’s assessment/plan?

A. Anticoagulation is preferred therapy 25%
B. CT/MRI of the brain is needed 25%
C. Carotid stenting is preferred therapy 25%
D. Baseline ABI’s should be obtained 25%
FMD and cerebral aneurysms

• ~10% of patients with cervical FMD have coexistent cerebral aneurysms

• ACC/AHA guidelines: obtain brain imaging
Which of the following is characteristic of lipedema?

A. 25%
B. 25%
C. 25%
D. 25%
Lipedema

- Grossly enlarged buttocks, thighs, calves
- Spares the foot; stops at the ankle- “ankle cut-off” sign
- Bilateral & symmetrical
- Torso relatively normal; disproportionate lower extremity involvement
- Non-pitting; tender; soft
- Easy bruising
- Frequently misdiagnosed as lymphedema
"Lipedema is not rare, but the diagnosis is rarely made"

Why doesn’t diet and exercise work for me?

Have you struggled to lose weight in your legs or arms?
Do you have painful fat, easy bruising or swelling?
Are your legs and/or arms resistant to diet and exercise?

LIPEDEMA

✓ Can be inherited
✓ Occurs almost exclusively in women
✓ Can occur in women of all sizes, from seriously underweight to morbidly obese
✓ Feet and hands remain unaffected
✓ Unlike the typical fat of obesity, lipedemetic fat generally cannot be lost with diet and exercise.
✓ Occurs in 11% of the female population.
A 62 y.o. woman presents with a swollen right leg. A venous duplex US reveals an occlusive thrombus within the right superficial femoral vein. What is the most appropriate initial management?

A. Non steroidal anti-inflammatory medication with heat and elevation 25%
B. Aspirin 325 mg daily 25%
C. Enoxaparin 1 mg/kg twice daily with concurrent warfarin 25%
D. Repeat venous duplex ultrasound in 5-7 days to assess for thrombotic propagation. 25%
A total of 46 family practitioners and general internists, 95 chairpersons of departments of anatomy, and 85 laboratory directors.

Only 24% (11/46) of the respondents would have administered anticoagulants to the patient as described.

Although the overwhelming majority of vascular laboratories use the term "superficial femoral vein" in venous duplex reports, the use of this term is potentially hazardous to patients.
Identify the *most effective* therapy for this condition:

A. Weight loss 25%
B. Thiazide diuretic 25%
C. Sequential intermittent lymphatic pumping 25%
D. None of the above 25%
A 42 yo presents with a tender cord along the medial calf. Venous duplex US confirms acute occlusive STP within the entire BK GSV. No DVT. Identify the current treatment recommendation.

A. Ibuprofen 400-800 mg TID x 10 days  
B. Warfarin (INR 2-3) x 4-6 weeks.  
C. ASA 325 mg QD x 2 weeks  
D. Fondaparinux 2.5 mg QD x 6 weeks.  

25% 25% 25% 25%
8.1.1. In patients with superficial vein thrombosis of the lower limb of at least 5 cm in length, we suggest the use of a prophylactic dose of fondaparinux or LMWH for 45 days over no anticoagulation (Grade 2B).
Overall thromboembolic complication at day 77 in patients with SVT.

Alain Leizorovitz et al. Blood 2013;122:1724-1729

RR : 0.18 (95% CI: 0.11 to 0.31) $p<0.001$

RR : 0.21 (95% CI: 0.14 to 0.30) $p<0.001$

Symptomatic thromboembolic complications (%)

Placebo (n=1500)
Fondaparinux (n=1502)

N=93
1.1%

N=141
9.4%

N=29
1.9%

Original composite outcome of CALISTO:
Symptomatic PE, DVT, extension of the index SVT to ≤3 cm from the SFJ, and recurrence of the index SVT

Composite outcome including the original outcome of CALISTO plus extension of the index SVT to >3 cm from the SFJ
Factors that Favor Anticoagulation in SVT

- Extensive SVT
- Above knee venous involvement
- Saphenofemoral junction involvement (10 cm)
- Severe symptoms
- *Great saphenous vein* involvement
- Hx of VTE
- Active CA
- Recent Surgery
Identify the disorder
Identify the disorder

A. Polyarteritis nodosa  25%
B. Erythema ab Igne  25%
C. Erythromelalgia  25%
D. Livedoid vasculopathy  25%
Erythema ab Igne or Livedo Reticularis with Pigmentation.

By H. G. Adamson, M.D.
Do you have a laptop?

Beware!!!

Extreme heat from laptop can cause TOASTED SKIN SYNDROME
May finally lead to SKIN CANCER

Warning

Stop using laptop over the legs

Must share this
WHAT IS GOING ON HERE?

# Identify the Disorder

<table>
<thead>
<tr>
<th>Disorder</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>A. Bier spots</td>
<td>25%</td>
</tr>
<tr>
<td>B. Nevus anemicus</td>
<td>25%</td>
</tr>
<tr>
<td>C. Tinea versicolor</td>
<td>25%</td>
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<tr>
<td>D. Vitiligo</td>
<td>25%</td>
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</table>
Identify the Disorder

A. Bier spots
B. Nevus anemicus
C. Tinea versicolor
D. Vitiligo
“Bier Spots”
Angiospastic Macules or Physiologic White Macules

- Arms/hands and legs of lighter skinned people
- Worse with limb dependency/improved with elevation
- Compression restores normal color
- Occur in either vasospastic disease OR with lympho-venous HTN
- Pathophysiology: focal vasoconstriction or failure of arteriolar constriction
“Bier Spots”

A 25 y.o. female with a history of a prior iliofemoral DVT complains of pain within the left thigh and calf after ambulating. Relief is obtained with rest and limb elevation.

What is the most likely etiology of her leg discomfort?

A. Popliteal venous entrapment syndrome 25%
B. Popliteal cystic adventitial disease 25%
C. Venous claudication 25%
D. Arterial claudication 25%
Iliofemoral Deep Venous Thrombosis

Venous Claudication

• Sequel of chronic iliac vein obstruction

• Increased resistance to venous outflow

• Intense cramping sensation within the calf, thigh, and/or hip while ambulating

• Relief obtained with rest and leg elevation
Prevalence of Venous Claudication after Iliofemoral DVT

- Akesson 1990 - 50%
- Delis 2004 - 44%

Only 10% of iliac DVT’s will recanalize if standard anticoagulation is used for Rx.
A venous stasis ulceration fails to heal despite appropriate topical & compression therapy. Which of the following medications can expedite healing?

A. Clopidogrel 25%
B. Pentoxifylline 25%
C. Cilostazol 25%
D. Horse chestnut seed extract (escin) 25%
Pentoxifylline for treating venous leg ulcers: Cochrane Library Review 2012

- 12 trials (864 patients); 11 placebo controlled
- Pentoxifylline is more effective than placebo for complete ulcer healing & improvement (RR 1.70)
- Pentoxifylline + compression is more effective than placebo + compression (RR 1.56)
- Pentoxifylline without compression is more effective than placebo (2.25)
- Adverse effects: GI upset
- Conclusions: pentoxifylline is an effective adjunct to compression for treating leg ulcers and may be effective in the absence of compression.

Jill et al. Published Online: 12 DEC 2012
The care of patients with varicose veins and associated chronic venous diseases: Clinical practice guidelines of the Society for Vascular Surgery and the American Venous Forum

Guideline 8. Medical treatment

<table>
<thead>
<tr>
<th>Guideline No.</th>
<th>8. Medical treatment</th>
<th>GRADE of recommendation</th>
<th>Level of evidence</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>1. Strong</td>
<td>A. High quality</td>
</tr>
<tr>
<td></td>
<td></td>
<td>2. Weak</td>
<td>B. Moderate quality</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>C. Low or very low quality</td>
</tr>
</tbody>
</table>

8.2 We suggest using pentoxifylline or micronized purified flavonoid fraction, if available, in combination with compression, to accelerate healing of venous ulcers.
Identify the *most likely etiology*

A. *Wuchereria bancrofti* 25%
B. Inferior vena cava occlusion 25%
C. Sarcoma 25%
D. Morbid obesity 25%
Massive Localized Lymphedema

- "Pseudotumors"
- "Pseudosarcomas"

Brewer 2011 Ann Plast Surg - 41 pts; average weight 421 lb [160-619]
A 46 yo woman presents with severe Raynaud phenomenon. An X-ray is obtained due to joint pain.
What is the most likely diagnosis?

A. Rheumatoid arthritis
B. Psoriatic arthritis
C. Cold agglutinin disease
D. Scleroderma
What is the most likely diagnosis?

A. Rheumatoid arthritis 25%
B. Psoriatic arthritis 25%
C. Cold agglutinin disease 25%
D. Scleroderma 25%
Calcinosis (circumsipta)

- Calcifications from Ca hydroxyapatite crystals in the skin and SQ tissues
- Scleroderma/CREST, dermatomyositis/polymyositis
- 6:1 female
- Primarily UPPER extremities (fingers)
- Well circumscribed Ca in soft tissues, frequently peri-articular
Vascular Medicine

JEOPARDY!