Venous stenting: May Thurners, a patient story

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Disclosure

Speaker name:

I have the following potential conflicts of interest to report:

☐ Consulting
☐ Employment in industry
☐ Stockholder of a healthcare company
☐ Owner of a healthcare company
☒ Other(s)

Speaker honoraria (BARD/BD, Optimed, Biotronik)
☐ I do not have any potential conflict of interest
Historical background

Left-sided predilection of thrombosis
Virchow R. Arch Path Anat 1851

Intrinsic lesions in 33% of cadavers
McMurrich JP. Am J M Sc 1908;135:342-6

The iliac compression syndrome
Cockett FB, Thomas ML. Am J M Sc 1908;135:342-6
May Thurner syndrome

The cause of the predominantly sinistral occurrence of thrombosis of the pelvic veins

R. May, M.D., and J. Thurner, M.D.

Right common iliac artery

Left common iliac vein

Spine


www.veinguide.com
Ontogenic vs. traumatic origin

In 66% venography “normal”

Signs on venography:
- Contrast translucency
- Contrast irregularities
- Lumen broadening / “pancaking”
- Axial, transpelvic or ascending collaterals (often absent)

Diagnostic sensitivity of IVUS >90%

22 year-old woman, recurrent swelling and pain in both legs (onset 3-4 years ago). Complaints especially occurred in standing or sitting position.

No history of VTE.

No venous claudication, CEAP C3, Villalta 7.
Case 1

MR venography
NIVL - anatomy
Case 2

45 year-old woman, swelling and pain especially in her left leg, started years ago.

History of VTE not clear.

Lifestyle limiting venous claudication, CEAP C4, Villalta 11.
Case 2

MR venography

Plethysmography

Left leg

Right leg
Outcome data

Meta-Analysis 37 studies:
Technical success 94-96%, periprocedural mortality 0.1-0.7%

<table>
<thead>
<tr>
<th>Study</th>
<th>Stent</th>
<th>N (total)</th>
<th>N (NIVL/MTS)</th>
<th>Follow Up</th>
<th>Primary Patency (total)</th>
<th>Primary Patency (NIVL/MTS)</th>
</tr>
</thead>
<tbody>
<tr>
<td>O’Sullivan G et al. presented @ LINC 2017</td>
<td>Zilver Vena</td>
<td>35</td>
<td>n/a</td>
<td>12 months</td>
<td>88%</td>
<td>n/a</td>
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<tr>
<td>De Wolf MAF et al. Eur J Vasc Endovasc Surg 2015</td>
<td>Sinus Venous</td>
<td>75</td>
<td>35</td>
<td>12 months</td>
<td>92%</td>
<td>100%</td>
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<tr>
<td>Stuck AK et al. J Endovasc Ther 2017</td>
<td>Sinus Obliquus</td>
<td>24</td>
<td>4</td>
<td>10 months</td>
<td>83%</td>
<td>n/a</td>
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<tr>
<td>Stuck AK et al. Vasa 2018</td>
<td>Sinus Obliquus</td>
<td>93</td>
<td>29</td>
<td>12 months</td>
<td>79%</td>
<td>89%</td>
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<tr>
<td>Razavi M. et al. J Vasc Surg Venous Lymphat Disord 2018</td>
<td>Vici Venous</td>
<td>30</td>
<td>11</td>
<td>12 months</td>
<td>93%</td>
<td>n/a</td>
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<tr>
<td>Black S et al. Eur J Vasc Endovasc Surg 2018</td>
<td>Vici Venous</td>
<td>88</td>
<td>n/a</td>
<td>21 months</td>
<td>78%*</td>
<td>n/a</td>
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<tr>
<td>Lichtenberg M et al. Vasa 2018</td>
<td>Venovo</td>
<td>80</td>
<td>30</td>
<td>6 months</td>
<td>96%</td>
<td>97%</td>
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<tr>
<td>Lichtenberg M et al. Vasa 2018</td>
<td>Vici Venous</td>
<td>82</td>
<td>40</td>
<td>12 months</td>
<td>94%</td>
<td>100%</td>
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<tr>
<td>Lichtenberg M et al. Vasa 2018</td>
<td>Sinus Obliquus</td>
<td>48</td>
<td>26</td>
<td>12 months</td>
<td>94%</td>
<td>100%</td>
</tr>
</tbody>
</table>

*assisted primary patency

Razavi MK et al. Circ Cardiovasc Interv 2015
Summary

MTS is a common “permissive” condition

Clinicians should be aware of the MTS (NIVL or thrombotic)

Diagnosis: multiplane venography combined with IVUS

Stenting of MTS is durable (with/without reflux)
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