Contralateral iliac vein occlusion after iliac venous stenting in patients with May-Thurner syndrome

Yong Sun Jeon, M.D., Ph.D
Division of Interventional Radiology
Inha University Hospital
Incheon, KOREA
Disclosure

Speaker name: Yong Sun Jeon, M.D.,Ph.D

I do not have any potential conflict of interest.
Case

Male/67

Left CLI stenting (14mm) with May-Thurner syndrome (2011)

Life long anticoagulation after discharge

6yrs later, right lower extremity DVT develops
Case

Male/57

Left CIV stenting (14mm) with May-Thurner syndrome (2013)

Life long anticoagulation after discharge

3yrs later, right lower extremity DVT develops
May-Thurner syndrome in Inha Univ. Hospital

- Retrospective analysis
- 2004 – present
- N = 102 symptomatic MTS → endovascular treatment
- M/F # 1:3 (26.5% vs. 73.5%)
- Mean age: 61.5 ± 15.2 years
- Mean follow-up: 940 days (range, 5-3998 days)
- F/U loss (< 6 months): 20 cases (19.6%)
  (including 7 recent cases not yet reached 6 months)
- Iliac vein stent occlusion: 21 cases (20.6%)
- Contralateral DVT: 10 cases (9.8%)
Contralateral DVT (n=10)

M/F: 4/6
Mean age: 69.1 ± 16.1 years
Mean time of detection: 42.8 ± 26.4 months (range, 5-98 months)
Mean follow-up duration: 60 ± 31.2 months (range, 12-100 months)
Venous intimal hyperplasia (VIH) of the IVC wall
- Stent tip infiltrates into IVC wall
- Longstanding irritation of vessel wall
- Hemodynamic stress
- Activation of macrophages; release of cytokines and growth factors
- Genetic predisposition (?)
### Contralateral DVT (n=10)

<table>
<thead>
<tr>
<th>Age/Sex</th>
<th>Comorbidity</th>
<th>Time of detection (months)</th>
<th>F/U (months)</th>
<th>Presumed cause</th>
<th>Treatment</th>
<th>Latest F/U</th>
</tr>
</thead>
<tbody>
<tr>
<td>M/42</td>
<td></td>
<td>5</td>
<td>14</td>
<td>VIH</td>
<td>CDT+stent</td>
<td>Patency</td>
</tr>
<tr>
<td>F/71</td>
<td></td>
<td>58</td>
<td>79</td>
<td>VIH</td>
<td>CDT+stent</td>
<td>Patency</td>
</tr>
<tr>
<td>M/57</td>
<td></td>
<td>40</td>
<td>48</td>
<td>VIH</td>
<td>CDT+stent</td>
<td>Patency</td>
</tr>
<tr>
<td>F/79</td>
<td>Cervical cancer</td>
<td>98</td>
<td>100</td>
<td>VIH</td>
<td>CDT+stent</td>
<td>Patency</td>
</tr>
<tr>
<td>F/51</td>
<td>Uterine myoma</td>
<td>36</td>
<td>73</td>
<td>Jailing</td>
<td>CDT+PMT</td>
<td>Patency</td>
</tr>
<tr>
<td>M/65</td>
<td>Rectal cancer</td>
<td>51</td>
<td>80</td>
<td>Unknown</td>
<td>CDT+stent</td>
<td>Patency</td>
</tr>
<tr>
<td>F/81</td>
<td></td>
<td>30</td>
<td>95</td>
<td>Jailing</td>
<td>CDT+PTA</td>
<td>Patency</td>
</tr>
<tr>
<td>F/95</td>
<td></td>
<td>38</td>
<td>39</td>
<td>Jailing</td>
<td>CDT</td>
<td>Patency</td>
</tr>
<tr>
<td>F/83</td>
<td></td>
<td>12</td>
<td>12</td>
<td>VIH</td>
<td>CDT+PTA</td>
<td>Occlusion</td>
</tr>
<tr>
<td>M/67</td>
<td></td>
<td>60</td>
<td>60</td>
<td>VIH</td>
<td>CDT+stent</td>
<td>Patency</td>
</tr>
</tbody>
</table>

VIH: Venous Intimal Hyperplasia  
PMT: Percutaneous Mechanical Thrombectomy  
PTA: Percutaneous Transvenous angioplasty
Conclusion

• Prevalence of contralateral DVT after iliac vein stenting is noteworthy.
• Can occur at late time point (mean # 42.8 months).
• VIH could be the underlying cause.
• The proximal end of the iliac vein stent should not contact the IVC wall, but ideally in the center of the confluence.
Thank you for your attention
Contralateral iliac vein occlusion after iliac venous stenting in patients with May-Thurner syndrome

Yong Sun Jeon, M.D., Ph.D
Division of Interventional Radiology
Inha University Hospital
Incheon, KOREA