The classification of the chronic venous obstruction and its clinical impact

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Disclosure

I have the following potential conflicts of interest to report:

- Receipt of grants/research support
  
  *Medtronic, BD, Cook, Philips, Bentley, Optimed, Boston Scientific, Abbott*

- Receipt of honoraria and travel support
  
  *Medtronic, BD, Cook, Philips, Bentley, Optimed, Boston Scientific, Abbott*
Classification

• Classification based on anatomical extension of the postthrombotic trabeculation (> 50 % lumen narrowing)

Extensive chronic venous obstruction
Therapeutic options for patients with extensive chronic venous obstruction

III  
Endovascular 
1) Endovascular + Endophlebectomy 
2) Endovascular + Stenting cranial to DFV or into the DFV

IVA  

IVB  
1) Endovascular + Endophlebectomy 
2) Endovascular + Stenting into the FV

V  
1) Contraindication (conservative) 
2) Endovascular + Recanalization of the FV down to a patent PV
Data after recanalization and stenting of NIVL / PTS cases from 12 centers

<table>
<thead>
<tr>
<th></th>
<th>12months</th>
<th>24months</th>
<th>36months</th>
<th>48months</th>
</tr>
</thead>
<tbody>
<tr>
<td>Type 1</td>
<td>94.9%</td>
<td>93.6%</td>
<td>93.6%</td>
<td>93.6%</td>
</tr>
<tr>
<td>Type 2</td>
<td>90.3%</td>
<td>85.9%</td>
<td>85%</td>
<td>83.7%</td>
</tr>
<tr>
<td>Type 3</td>
<td>80.8%</td>
<td>76.3%</td>
<td>69.5%</td>
<td>67.9%</td>
</tr>
<tr>
<td>Type 4</td>
<td>60.6%</td>
<td>51.4%</td>
<td>37.3%</td>
<td>27.7%</td>
</tr>
<tr>
<td>Type 5</td>
<td>39.4%</td>
<td>25.8%</td>
<td>17.2%</td>
<td>5.7%</td>
</tr>
</tbody>
</table>

Total number: 1030 (1207 limbs)

Age: 44.0 ± 14.7

Female: 615 (59.9%)

Classification:
- Type 1: 274 (22.7%)
- Type 2: 253 (21.0%)
- Type 3: 268 (22.2%)
- Type 4 (4a+4b): 298 (24.7%)
- Type 5: 114 (9.4%)
Examples

type II

type III

type IV a

type V

Courtesy Toonder
Example type III
24 months patency ca. 80 %
48 months patency rate: ca. 70%

Recanalization and stenting
Example type IVa
Estimated 24 months patency ca. 52%
48 months patency rate: ca. 30%

Angiogram after recanalization and predilation
DFV is the main inflow vein. FV is severely involved

Completion angiogram after recanalization and stenting
Example type V
24 months patency ca. 25%
48 months patency ca. 5%

- Conservative treatment
- In selected cases with non-healing ulcer additional recanalization of FV could be taken in consideration
The only inflow vein is the DFV which is also severely involved.

Case
Left side: type III (24 months patency ca. 80%)
Right side: type V (24 months patency ca. 25%)
Completion angiogram after recanalization and bilateral iliofemoral stenting stenting with IVC reconstruction

Left leg: type III

Right leg: type V
Patient presented with increased pain and tension of the right leg on first follow up visit (2 weeks postop.)
CTV performed
Clinical impact of the classification

- To ease the decision making for indication and contraindication (predicting outcome)

- Support therapeutic decisions
  - Endo vs hybrid vs conservative
  - Duration and type of anticoagulation

- To aid scientific reporting
  - Comparison of results between studies
  - Comparison of stent outcome
Thank you very much

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