Better Imaging Of Endoleaks (Type 1) With Contrast MRI Permits Better Diagnosis And Treatment Leading To Better Outcomes

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Disclosure

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ENDOLEAKS

Questions before Answers

- Are endoleaks (always) hazardous?
- Can we always detect endoleaks?
- Are there common determinators for intervention, independent from the type EL?
- Is it worth the efforts for precise determination of the type EL?

Are endoleaks (always) hazardous?

- NO -

Can we always detect endoleaks?

- NO -

- Hidden type I a-b, position dependent?
- Hidden type III?
- Fabric (micro) porosity, suturehole leakage?
- Combination of the above
Can we always detect endoleaks?

- NO -

• Detection is limited by the tools we have
• CTA, even in the delayed phase and Duplex-scan with contrast might not always be good enough for detection

A patient after endovascular aneurysm repair with continued aneurysm growth with no endoleak on (A) arterial phase and (B) delayed phase computed tomography angiography, and (C) pre-contrast T1 weighted fat suppressed images. (D) The post-contrast T1 weighted fat suppressed images clearly demonstrated a type II endoleak originating from a lumbar artery. Furthermore, on the pre-contrast images a high signal is seen around the stent graft limbs, representing so called wet thrombus.

So, at this moment...

• We don’t know always whether contrast in the Aneurysm Sac is only due to type II
• Detection of type II is limited by the tools we have
• But, the choice and success of the treatment/intervention is dependant on the kind of endoleak

Clinical relevance of type II

• It’s low pressure
• EVAR for RAAA works really well in the “presence” of open lumbar arteries
• But, you have to be sure that type II is the only cause of Aneurysm Sac Expansion
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<thead>
<tr>
<th>Is unlimited Sac Expansion harmless?</th>
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<tr>
<td>- NO –</td>
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<td>• Large expansion may cause a new type I endoleak or dislodgement of a modular stent graft system</td>
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<td>• This will lead to increasing risks for morbidity and even mortality</td>
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<td>• Fast Growing Sac Volume Expansion</td>
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<td>• Predictors for growing fast?</td>
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<td>• Highly dependent on the determination of type EL</td>
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<td>• Sustainable results from secondary interventions can only be achieved by optimizing diagnostic tools</td>
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