Fusion of CEUS and CT Scan for better detection of endoleakages after EVAR

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Disclosure
Speaker name: Sven Seifert, MD

☐ 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)
☒ I do not have any potential conflict of interest
Basics and Principles of CEUS

- Composition of microbubbles
- Interaction with ultrasound waves
- Resonating the sound beam by rapidly contracting and expanding (vibration) – several thousand times more reflective than normal tissue
- Gas (high echogenicity) surrounded by a shell (stability)
- Gas: SF6 gas 8µl/ml - single pass through the lungs
- Shell: DSPC/DPPG phospholipid monolayer
Fusion of CEUS und CT Scan

regular CEUS
Typ Ia Endoleak seen in Duplex Scan
Fusion of CEUS und CT Scan

Typ Ia Endoleak seen in CEUS
Typ III

Fusion of CEUS und CT Scan
Fusion of CEUS und CT Scan

Duplex sonography alone
Fusion of CEUS und CT Scan

1ml /1 min
Fusion of CEUS und CT Scan

1ml /1min

2ml/2min
Fusion of CEUS und CT Scan

1ml/1min

2ml /2min
Results

2 cases of suspected Typ V endoleak were found to be type II

Conclusion

- fusion of nativ CT Scan and CEUS is easy and might be helpful to clarify the type of endoleak

- for patients with renal insufficiency follow up with fusion is better in any way

- Unsolved question: Is there really a type V endoleak?
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