PCSK9 Inhibitors: Highlights for the Vascular Specialist in 2018

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Disclosures
- Advisory Board
  - Apple
- Grants
  - Amgen
  - Boston Scientific

PCSK9 promotes LDL receptor degradation


PCSK9 inhibition promotes LDL receptor recycling

Clinical trials
- FOURIER (2017): 27,564 patients with ASCVD & LDL-C > 70 mg/dl on statins randomized to evolocumab/Repatha vs placebo followed for median 2.2 years
  - LDL-C: 30 mg/dl vs 92 mg/dl
  - HR 0.85, ARR 1.5%
- ODYSSEY OUTCOMES (2018): 18,924 patients with ACS 1-12mo previously & LDL-C > 70 mg/dl on statins randomized to alirocumab/Praluent vs placebo followed for median 2.8 years
  - LDL-C: 66 mg/dl vs 92 mg/dl
  - HR 0.85, ARR 2.0%

Evolocumab and peripheral arterial disease

- Similar relative benefit but greater absolute benefit since PAD is higher risk than no PAD


2018 ACC/AHA Cholesterol Guidelines

Very High-Risk ASCVD

Very High-Risk ASCVD: Target < 70 mg/dl


Doses

- Evolocumab
  - 140mg sc q2w
  - 420mg sc q4w

- Alirocumab
  - 75mg sc q2w
  - 150mg sc q2w

Copays

Navar AM, et al. JAMA Cardiology. 2017
Documentation tips for successful prescription

- Clear documentation of indication, LDL-C, and current medications
- Atherosclerosis burden
- “Maximum tolerated statin”
- Recent statin challenge if remote intolerance (atorvastatin, rosuvastatin)
- Ezetimibe

Future

- Short-term
  - siRNA (inclisiran)
- Long-term
  - Gene editing

Conclusions

- PCSK9i lowers recurrent ASCVD risk, particularly when PAD is present

- For those with PAD and LDL > 70 mg/dl on max tolerated statin + ezetimibe, consider PCSK9i

- Vascular specialists can/should prescribe PCSK9 inhibitors