Infective Endocarditis 2018

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Disclosures

• NHLBI (CTSN), NIDCR
• Medtronic, Apollo TMVR
• Edwards Life Sciences, Early TAVR
Outline

• Epidemiology
• Imaging
• Indications for Surgery
Infective Endocarditis
Changing Epidemiology

**Then**
- RHD
- Younger
- Native valve disease
- Streptococci
- “sub-acute” illness

**Now**
- Degenerative disease
- Older (DM, ESRD, etc.)
- IJDUs, CIEDs
- *S. aureus*, MRSA, ABx-
- “acute” illness
OPIOID CRISIS

Dependence  Heroin  Detox

Adverse  Withdrawal  Drugs  Fatal

Epidemic  Depression  Abuse  Laws

Addiction  Overdose

Usage  Communities  Injections  Usage  Health

Addicts  Addiction  Deaths  Treatment

Control  Policing  Antidote

Families  Drugs  Doctors  Political

Fatal  Overdose  Control
Case 1

Acute Severe AR

26 y/o woman, 2nd trimester pregnancy, worsening heart failure
54 y/o man with DM, fever, back pain, murmur, L psoas abscess
Case 3
Case 3
PET-CT for Endocarditis

Pizzi MN et al. Circulation 2015; 132:1113-26
Infective Endocarditis

Indications for Surgery

Class I

- Heart Failure
- Evidence of LV dysfunction or PA HTN
- Abscess, Fistula, Pseudo-Aneurysm
- Fungal or highly resistant bacterial IE
- Persistent bacteremia after 1 week Ab Rx

Infective Endocarditis

Indications for Surgery

**Class II**

- Recurrent emboli and persistent vegetation despite appropriate AB Rx (IIa)
- Large (> 10mm) mobile vegetation, particularly on AMVL (IIb)
- Increase in vegetation size on AB Rx (IIb)

RCT: Early Surgery for IE

- N=78
- Mean age 47 y
- Severe L-sided VHD
- ~1/2 w/ emboli on adm
- ~1/3 w/ size >15mm
- ~60% streptococci
- 1º EP= in-hosp death + embolic events @ 6wks

Case 2
54 y/o man with DM, fever, back pain, murmur, L psoas abscess
Infective Endocarditis: CIEDs

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<tr>
<th>Recommendations</th>
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<tr>
<td>Complete removal of pacemaker or defibrillator systems, including all leads and the generator, is indicated as part of the early management plan in patients with IE with documented infection of the device or leads</td>
<td>I</td>
<td>B</td>
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<tr>
<td>Complete removal of pacemaker or defibrillator systems, including all leads and the generator, is reasonable in patients with valvular IE caused by <em>Staphylococcal aureus</em> or fungi, even without evidence of device or lead infection</td>
<td>IIa</td>
<td>B</td>
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Take Home Messages

• Changing epidemiology
• Increasing role for advanced imaging
• Multi-disciplinary team approach
• Increasing performance of surgery in the early phase of IE
• Aggressive CIED management