What to do with Recurrent Prosthetic Disease in IV Drug Abusers

“. or ?”

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Disclosures

- Edwards Lifesciences: Consultant and Royalties
This Problem is Increasing: Worldwide
Surgical outcomes of infective endocarditis among intravenous drug users

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Janice M. Camuso, RN, a Ilan Youngster, MD, c Sandra B. Nelson, MD, c Arthur Y. Kim, MD, c
Serguei I. Melnitchouk, MD, a James D. Rawn, MD, b Thomas E. MacGillivray, MD, a
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Perspective

Among 436 adult patients with active endocarditis undergoing surgery, 78 (17.9%) were current intravenous drug users with their increasing proportion in recent years. Although intravenous drug users had lower cardiovascular risk burdens, risks of re-infection and valve-related complications were significantly higher compared with drug nonusers.

J Thorac Cardiovasc Surg 2016;152:832-41
Missing the forest for the trees: The world around us and surgical treatment of endocarditis

Victor A. Ferraris, MD, PhD, and Michael E. Sekela, MD

Endocarditis at the University of Kentucky

Perspective
Intravenous drug abuse-related endocarditis represents more than just operative treatment of complex problems of valvular endocarditis. Thoracic surgeons can play a role by bringing the problem of intravenous drug abuse to public consciousness and by facilitating solutions to the underlying causes of this problem.

J Thorac Cardiovasc Surg 2016;152:677-80
In total, 120 SAE episodes related to intravenous drug use were identified. Its incidence in Stockholm was 0.76/100,000 adult person-years for the entire period, increasing from 0.52/100,000 person-years in 2004 to 2008 to 0.99 in 2009 to 2013 (P=0.02).
How Much Added Operative Risk is There with IV Drug Users vs. Other SBE Patients?
And How Much Recurrent SBE?

This is Confusing and Surprising
Thirty-day mortality rates were lower in IVDUs than non-IVDUs (3.8% vs 13.7%; P = .012).

Conclusions: The proportion of IVDUs among surgically treated IE patients is increasing. Although IVDUs have lower operative risk, long-term outcomes are compromised by reinfection.
Surgical outcomes of infective endocarditis among intravenous drug users

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Injection Drug Use and Outcomes After Surgical Intervention for Infective Endocarditis

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Conclusions. Between 3 and 6 months after operation for IE, patients who inject drugs have a hazard of death or reoperation that is about 10 times that of patients who do not inject drugs. Before and after, the HRs are much smaller and not statistically significant.

Ann Thorac Surg 2015;100:875–83
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Fig 2. Cumulative incidence of death and reoperation for infective endocarditis. (A) Patients who injected drugs and (B) patients who did not inject drugs.
Cox regression analysis identified intravenous drug use as an independent risk factor for diminished survival (p 0.03), although not for reoperation (p 0.95)
Long-Term Outcome for the Surgical Treatment of Infective Endocarditis With a Focus on Intravenous Drug Users

David G. Rabkin, MD, Nahush A. Mokadam, MD, Donald W. Miller, MD, Raymond R. Goetz, PhD, Edward D. Verrier, MD, and Gabriel S. Aldea, MD
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CONCLUSIONS: Cardiac surgery for infective endocarditis has acceptable early postoperative results among intravenous drug users. The 2- and 5-year survival were 79 and 59%, respectively. The number of reinfections was high within 2 years, as continued drug use seems to be a major challenge for this group.
Why The Variable Results??
Does It Increase or Lower Early Risk?
The vagaries of patient selection in cardiovascular surgery

Anelechi C. Anyanwu, MD, FRCS

| Population Bias | • Affluent vs deprived catchment area  
|• Level of health, education and economy |
| Institutional Bias | • Private vs public  
|• Academic vs community |
| Referral Bias | • Insured vs uninsured  
|• High vs low socioeconomic status  
|• Distant vs local referral |
| Treatment Selection Bias | • Cherry-picking  
|• Seniority based case selection |
| Classification bias | • Performance of additional procedures  
|• Inclusion based on completed procedure |
| Survivor Treatment Bias (Time Dependent Bias) | • Deferred surgery for endocarditis  
|• Deferred post-infarct VSD repair |
| Lead Time Bias | • Surgery on asymptomatic disease  
|• Early institution of ECMO |
| Hidden Bias | • Team, logistic and unknown factors  
|• Subjective factors |
Operative Risk is Somewhat Higher:

But Maybe We are Turning Down the Worst Patients?

Late Survival and Reoperation Depends on Recidivism
“What To Do”
With Recurrent Disease

Medical (HCV, HIV, CVA…)
Ethical
Financial
Societal
“Individuals need to accept responsibility for their own health and not look to physicians and nurses to relieve them of their duty”

- Drug Abuse Mortality
- Protecting the Team
- The Good of Society
- The Surgeon as a Professional
Con: Dr Jones Cannot Refuse to Operate on Mr Smith
Tomas A. Salerno, MD

- Psychologist’s View
- Lawyer’s View
- Surgeon’s View
- The Surgeon as a Professional
“…some basic principles of medical ethics. The primary obligation of physicians is to their patients [20, 21]. We have other obligations, of course, to ourselves, to the institutions in which we work, to our colleagues, and to society, but these are all secondary: Consideration of the patient’s well-being must come first. In addition, social worth has no place in medical decision making.”

Robert Sade MD
“If a surgeon applies the comparison test and finds that he would operate on the innocent patient, but still cannot, in good conscience, offer an operation to the drug addict, he can consider alternative courses. He can seek advice from experienced, trusted colleagues or an ethics committee in thinking through the many complexities of the case, or he can refer the patient to another surgeon. He should not, however, simply declare that an operation is not indicated and close the book. He owes more than that to every patient.”
How I Approach

• First Time: Signed Contract, Psych; Rehab; Family; Have “The Talk”
• Second Time: Reassess Comorbidities (medically futile?); Do the Reop; Intense Rehab, Contract…
• Third Time: 3 Strikes and You’re Out? “Compassionate Use”?
• “Who ya gonna call?” Bioethics!