Endocarditis as a Sentinel Marker for New Epidemics of Injection Drug Use and Hepatitis C Virus Infection

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Objectives

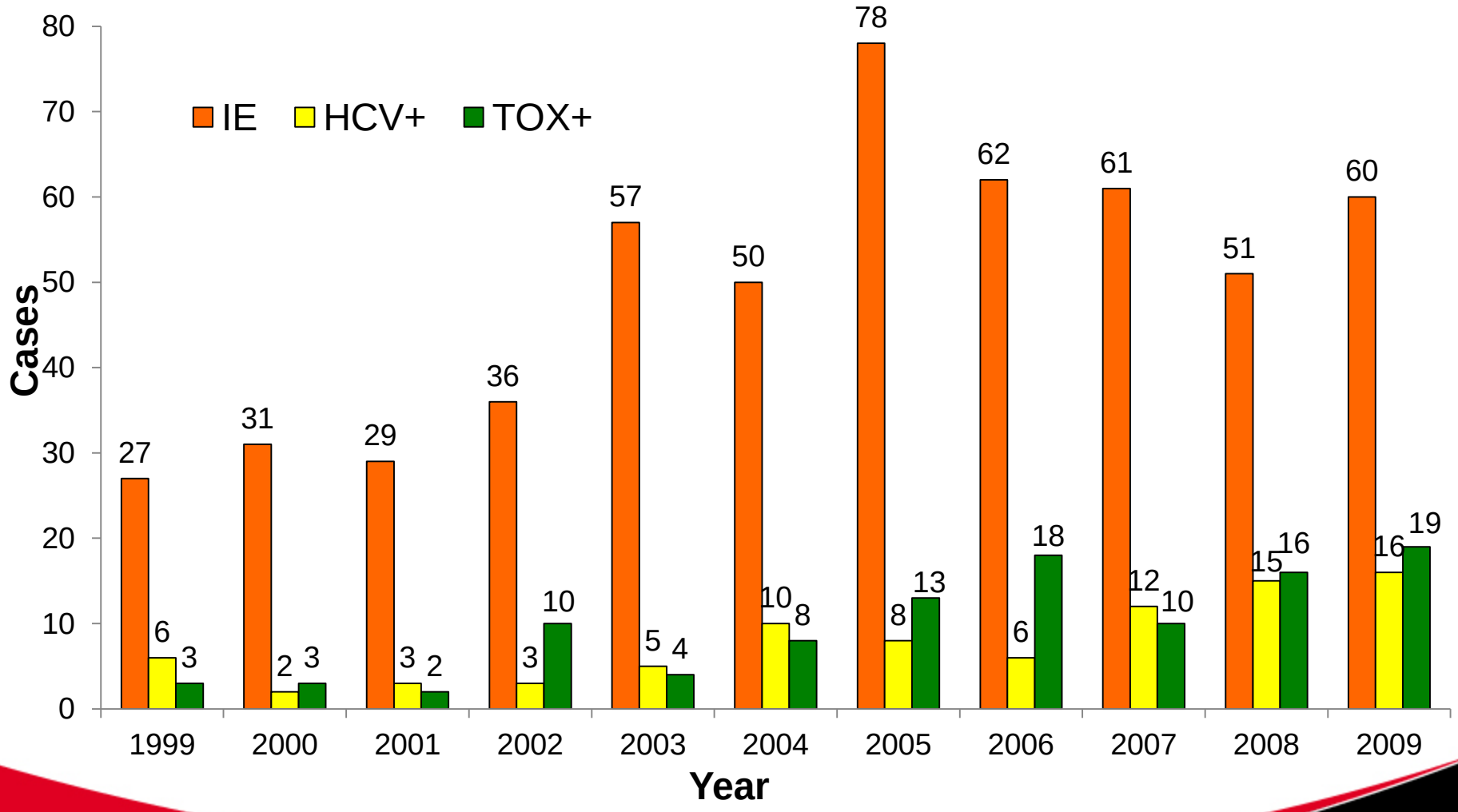
- Prevalence of injection drug use (IDU) is difficult to define
- Anecdotally, at The University Hospital, a tertiary care teaching hospital serving metropolitan Cincinnati, there appeared to be an increase in Infective Endocarditis (IE) over the past 10 years
- We sought to define the prevalence of IDU, HCV, and HIV among patients admitted to TUH with IE

Methods

- Retrospective chart review
- Patients admitted for IE (Modified Dukes Criteria) from Jan. 1, 1999 - Dec.31, 2009
- Chi-squared test used for all p values

Results

Endocarditis Admissions, HCV and Tox+ at TUH 1999-2009



Endocarditis Cases 1999-2009: Demographics

Variable	No. (%)
Total	542
Sex:	
Male	308 (57%)
Race:	
White	319 (59%)
Black	203 (37%)
Other	20 (4%)
Mean Age (SD), years	50.6 (15.8)
Insurance:	
Public	414 (76.4%)
Private	110 (20.3%)
*None	18 (3.3%)
Mean length of hospitalization (SD), days	14.6 (12)
Length of hospitalization range, days	(1-109)
In-hospital mortality	111 (28%)

HIV, HCV and Toxicology Testing

Variable	No. (%)
HIV status	138 (25%)
Positive	28 (5%)
Negative	110 (20%)
Not tested	404 (75%)
HCV status	175 (32%)
Positive	86 (16%)
Negative	89 (16%)
Not tested	367 (68%)
Toxicology Screen	155 (28%)
Positive	106 (19%)
Negative	49 (9%)
Not tested	387 (72%)

Toxicology and IDU History

	Tox+	Tox-	Tox not tested	IDU+ by history	p value (btwn Tox testing)
Total	106	49	387	108	
Screened for HCV	70 (66%)	22 (45%)	83 (21%)	75 (69%)	<0.001
HCV positive	50 (71%)	6 (27%)	30 (36%)	53 (71%)	0.019
Screened for HIV	66 (62%)	25 (51%)	47 (12%)	72 (67%)	<0.001

Conclusions

- Over a 10 year period there was a 2-fold increase in IE admissions, a 4-fold increase in HCV prevalence and a 6-fold increase in known IDU by +toxicology screens, but no appreciable increase in +HIV tests
- This is an underestimation of the actual prevalence as most admissions were not screened for IDU, HCV and/or HIV
- The observation of a sharp increase in IE cases may be useful as a sentinel marker of new IDU and HCV epidemics
- IDU status needs to be assessed and screening for HCV and HIV performed among pts admitted for IE, both for optimal inpatient care and so that linkage to appropriate outpatient care can be implemented

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