



Prevalence of Heroin Use and Heroin-related Asthma Symptoms among Inner-City Asthmatics

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Background

- Heroin use was documented to have risen steadily throughout the 1990s (NIDA 1997)
- New, young users
- Insufflation preferred (NIDA 1999)
- Increased availability, increased potency

Background

- Heroin was a common trigger in inner-city ICU asthma patients (Krantz, 2003)
- 13/23 patients (56%) had asthma exacerbation associated with heroin use
- 84 Asthmatics vs. 42 DKA controls:
 - More likely to use heroin ($p=0.0006$)
 - Cases more likely to have + opiate UDS ($p=0.001$)

Background

- The prevalence of heroin use and heroin-related asthma symptoms in less severe inner-city populations is unknown

Objectives

- Examine drug use and drug-related asthma symptoms in inner-city ED asthma patients
- Determine prevalence of heroin use and heroin-related symptoms in this group
- Compare user and non-user groups on various clinical and demographic characteristics

Methods

- Cross sectional survey of patients aged 18-55 presenting to the ED with acute asthma exacerbation
- Structured interview:
 - Demographics
 - Asthma history & treatment
 - Drug Use
 - Drug-related asthma symptoms

Methods

- Admission peak flows were recorded, and compared to US population norms (Hankinson 1999)
- Frequency of asthma symptoms was used to classify asthma severity, using NHLBI guidelines (NHLBI 2003)
- Variables were compared between groups, using chi-sq or t-tests

Results

- 140 patients eligible, 134 participated
- Sample characteristics
 - Mean age = 41 years
 - 54% male
 - Mean age at asthma dx = 21 years
 - Smoking status:
 - 48% current, 23% former, 29% never
 - 67% used inhaled steroids in last month

Prevalence of drug use in 132 subjects providing drug use history

- 38 (29%) reported heroin use in lifetime
 - 28 (21%) with heroin use in past week
 - 10 (8%) with former heroin use
- 60 (46%) reported ever using cocaine
 - 19 (15%) with cocaine use in past week
- 10 (8%) with current concomitant use of both drugs

Characteristics of the 28 current heroin users

- 26 (92%) report insufflation as main route of use
- 18 (49%) asthma onset after heroin use
- 23 (89%) reported that heroin makes asthma symptoms worse

Characteristics of the 28 current heroin users (cont.)

- 25 (89%) of users report having taken a long break from heroin use
 - Mean length = 2.4 years
 - 18 (72%) said asthma symptoms improved during the break
- 12 (43%) previously on methadone
- 24 (92%) would like help to stop using heroin

Heroin Users vs. non-Users

- No differences in:
 - Age / gender
 - Age of asthma onset
 - History of hospitalization
 - Asthma severity

Heroin Users vs. non-Users

- Users were more likely to:
 - Have previous intubation (52 vs 27%, $p=0.0221$, controlling for smoking)
 - ER for sole asthma care (100 vs 76%, $p=0.0059$)
 - Smoke currently (78 vs 40%, $p=0.0004$)
 - Have ↓ mean % predicted peak flows upon admission (42 vs 62%, $p=0.0026$, controlled for smoking)

Limitations

- Drug use based on patient self-report
- Single study center
- Could have collected more detail on cocaine-related asthma symptoms
- Difficult to ascertain whether there is a temporal relationship between heroin use and asthma symptoms given the cross-sectional design

Conclusion

- Acknowledged heroin use was present in 1/5 of asthmatics presenting to an inner-city ER for acute asthma exacerbation
- Heroin-related asthma symptoms were common
- Treatment of drug dependency may contribute to improved asthma control in this subgroup