We compared hospital re-admission rates due to exacerbations of obstructive pulmonary disease amongst current/ex-illicit drug smokers versus current/ex-tobacco smokers.

Hypothesis

‘Are those who smoke illicit drugs admitted to hospital with a clinical diagnosis of exacerbation of COPD more likely to be readmitted with a further exacerbation than current/ex-tobacco smokers?’

Methods

Re-admission was defined as any admission, after the first, with an exacerbation of obstructive pulmonary disease during the study period. All admissions with a presumptive diagnosis of ‘exacerbation of COPD’ between January 2009 and September 2011 were reviewed. This was performed retrospectively using our COPD admission database.

Results

There were 950 sequential hospital admissions in 709 patients over a 33 month period. We found 230 ex-tobacco smokers, 370 current tobacco smokers and 89 current or ex-illicit drug smokers. Re-admission rates with exacerbation of obstructive pulmonary disease were higher in illicit drug smokers compared to current/ex-tobacco smokers (1.00 v. 0.22/0.26, p < 0.001). Illicit drug smokers were younger (50 v. 72.9/69.9 [mean 71.2] years, p < 0.001) and had shorter length of hospital stay (7.44 v. 9.28/10.69 [mean 9.87] days, p = 0.038). Illicit drug smokers with FEV1 < 1 litre (L) had higher readmissions (2.56) than ex/current tobacco smokers (0.6) with FEV1 < 1L (p < 0.001) [Table 1]. Illicit drug smokers with FEV1 > 1L did not show this trend (p = 0.236). Tobacco pack years were higher in tobacco smokers (40.22) compared to illicit drug smokers (22.47), p.

Admissions requiring non-invasive ventilation (NIV) for type 2 respiratory failure were more common in illicit drug smokers (8.4 v. 3%, p < 0.002).

Conclusion

We have shown that readmission rates in illicit drug smokers are higher than in tobacco smokers. These patients tend to be younger, have a male predominance, have shorter length of hospital stay and are more likely to require NIV; readmissions were more predominant in illicit drug smokers with an FEV1<1.

REFERENCE
