Successful treatment of chronic hepatitis C virus infection in severely opioid-dependent patients under heroin maintenance

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Abstract

**Background:** Severely opioid-dependent patients are at high risk of both acquiring and spreading the hepatitis C virus (HCV). It is uncertain, however, whether these patients are possible candidates for HCV treatment. We therefore explored treatment retention and adherence as well as sustained viral response in co-morbid severely opioid-dependent subjects under heroin maintenance, who previously failed in conventional substitution treatment or were not in any drug treatment.

**Methods:** All patients in heroin maintenance in the German heroin trial, who received standard antiviral HCV therapy with pegylated interferon and ribavirin, were included. Co-consumption of licit and illicit drugs was tolerated as long as it did not interfere with treatment.

**Results:** Twenty-six patients in heroin maintenance were treated for chronic HCV infection. Both the Global Severity Index of the Symptom Checklist 90-R (average score 65.9) and the Opiate Treatment Index (average score 16.6) indicated relevant co-morbidity. Twenty-one patients (81 %) were retained in treatment; the adherence rate was 92 %. Eighteen patients (69 %) achieved a sustained viral response, with a 100 % response rate for genotype 2, 90 % for genotype 3, and 42 % for genotype 1.

**Discussion:** This is the first study that investigates the feasibility of antiviral HCV treatment in a well-defined sample of co-morbid severely opioid-dependent subjects in heroin maintenance treatment. Viral response rates are comparable to non-drug-user populations. Within a need-adapted treatment setting, HCV treatment may even be extended to difficult-to-treat opioid-dependent patients.

**Keywords:** Hepatitis C, injection drug use, heroin maintenance, antiviral treatment.

Estimating the prevalence of drug injection using a multiplier method based on a register of new HIV diagnoses

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Knowledge of prevalence of illegal drug injection can aid the design and evaluation of services for problem drug users. In this study, prevalence of recent injectors in Spain was estimated with a multiplier method using the number of injectors in a population register of new HIV diagnoses, HIV incidence among injectors from cohort studies and HIV prevalence among injectors in a drug treatment register. Prevalence in 2008 was 38.8 (95 % CI 23.8–53.8) per 100 000 population, a 2.8 times reduction compared with 2001. This method permits estimation of both prevalence and trends of drug injection. It is sustainable and routinely applicable in many countries.

Keywords: Drug injection, estimation, multiple method, prevalence, Spain.

Tweaking, bombing, dabbing and stockpiling: the emergence of mephedrone and the perversity of prohibition

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Abstract

Significant changes in British recreational drug use were seen throughout 2009, with the emergence and rapid growth in the availability and use of substituted cathinones or ‘M-Cats’ (most notably mephedrone and methylene), a group of psychoactive drugs not currently controlled under the Misuse of Drugs Act 1971 (HM Government, 1971), with similar effects to ecstasy, cocaine and amphetamines. The reasons for the appearance and appeal of this group of so-called ‘legal highs’ are explored here in relation to availability, purity, legality and convenience. The authors argue that a reduction in the availability (and thus purity) of illegal drugs such as ecstasy and cocaine and resultant disillusionment among users was a key motivation for displacement to substituted cathinones, conveniently and legally purchased online. Finally, we explore policy considerations around the likely criminalisation of substituted cathinones and the challenge of providing rapid yet considered harm reduction responses to emergent drug trends in the face of a minimal scientific evidence base and eager press demonisation.

Keywords: Substituted cathinones, M-Cats, mephedrone, methylene, legal highs, displacement, availability, purity, internet.

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Evidence for the effectiveness of sterile injecting equipment provision in preventing hepatitis C and human immunodeficiency virus transmission among injecting drug users: a review of reviews

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Abstract

Aims: To review the evidence on the effectiveness of harm reduction interventions involving the provision of sterile injecting equipment in the prevention of hepatitis C virus (HCV) and human immunodeficiency virus (HIV) transmission among injecting drug users (IDUs). The interventions assessed were needle and syringe programmes (NSP), alternative modes of needle/syringe provision (pharmacies, vending machines and outreach) and the provision of injecting equipment other than needles/syringes.

Methods: Systematic searches of the English language literature to March 2007 were undertaken to identify systematic, narrative or meta-analytical reviews (also known as a review of reviews) of the impact of interventions on HCV transmission, HIV transmission or injecting risk behaviour (IRB). Critical appraisal criteria classified the reviews as either high quality ('core') or supplementary: a framework based on the quality of reviews, the reviewers’ conclusions and the designs/findings of the primary studies was used to derive evidence statements.

Results: Three core and two supplementary reviews of injecting equipment interventions were identified. According to the proposed framework, this study found (a) insufficient evidence to conclude that any of the interventions are effective in preventing HCV transmission; (b) tentative evidence to support the effectiveness of NSP in preventing HIV transmission; (c) sufficient evidence to support the effectiveness of NSP (and tentative evidence of an additional impact of pharmacy NSP) in reducing self-reported IRB; and (d) little to no evidence on vending machines, outreach or providing other injecting equipment in relation to any of the outcomes.

Conclusions: The evidence is weaker than given credit for in the literature. The lack of evidence for effectiveness of NSP vis-à-vis biological outcomes (HCV and HIV incidence/prevalence) reflects the limitations of studies that have been undertaken to investigate these associations. Particularly for HCV, low levels of IRB may be insufficient to reduce high levels of transmission. New studies are required to identify the intervention coverage necessary to achieve sustained changes in blood-borne virus transmission.

Keywords: Hepatitis C, HIV, needle-exchange programmes, review.

Mortality among drug users after discharge from inpatient treatment: an 8-year prospective study

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Abstract

Background: Drug users who are leaving/completing inpatient medication-free treatment may, like drug users released from prison, have an elevated risk of dying from fatal overdoses. This is mainly explained by their low drug tolerance.

Methods: Two hundred and seventy-six drug users who had been admitted to 11 inpatient facilities in Norway, were followed prospectively after discharge from treatment during an 8-year period (1998–2006). The following instruments were used: EuropASI, SCL-25 and MCMI II. Information on deaths and causes of death were obtained from the National Death Register.

Results: A total of 36 deaths were registered after discharge from treatment during the observation period, of which 24 were classified as overdose deaths. During the first 4 weeks after discharge six persons died, yielding an unadjusted excess mortality of 15.7 (rate ratio) in this period (CI 5.3–38.3). All were dropouts and all deaths were classified as opiate overdoses. There was no significant association between time in index treatment and mortality after discharge, nor did any background characteristics correlate significantly with elevated mortality shortly after discharge.

Conclusions: The elevated risk of dying from overdose within the first 4 weeks of leaving medication-free inpatient treatment is so dramatic that preventive measures should be taken. More studies from similar inpatient programmes are needed in order to obtain systematic knowledge about determinants of overdose deaths shortly after leaving treatment, and possible preventive measures.

Keywords: Mortality, overdoses, drug use, inpatient, treatment, prospective.