Changes in alcohol consumption during opiate replacement therapy

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Research question

Does alcohol consumption increase or decrease during opiate replacement therapy (ORT)?

Key points

- 14 studies were identified for inclusion in the review; one further study known to the authors which was not retrieved by the search was added.
- Two systematic reviews were included in the review.
- The evidence base to assess whether alcohol consumption changes upon initiation of ORT is mixed with no strong evidence to support a change in either direction; one systematic review concluded that problematic use likely does not change and the other concluded that the evidence base was inconclusive.
- Problem alcohol use remains a problem for a considerable proportion of individual receiving ORT and additional interventions are likely to be required to reduce alcohol consumption.

Background

Anecdotal evidence from drug treatment services across Scotland indicates alcohol use often increases during opiate replacement treatment (ORT). It is suggested that alcohol is being used as a legal substitute to potentiate the effect of opiates. This is perceived to be a relatively recent issue that has emerged in the last five years approximately. Two years ago a research proposal was submitted to study this issue in Scotland but funding was not given. In the meantime anecdotal evidence from clinicians continues. Alcohol use is also known to play a role in some drug-related deaths. In the absence of Scottish data on prevalence and in the knowledge that research is being conducted elsewhere this brief topic review was undertaken to update the state of knowledge. The topic review sought to review the published literature which measured alcohol use at treatment intake and follow-up to determine whether levels of alcohol consumption change upon initiation of ORT. Particular note is made of increased alcohol use in those who did not have heavy or dependant use at treatment initiation as it is this group for which treatment is not working optimally. A recent, unpublished review conducted by an Irish Research group looked at the prevalence of problem alcohol use among problem drug users; however, this review did not look at changes over time so whether alcohol use changes upon starting ORT is not evident (Catriona Matheson, personal communication, September 24, 2013).

Methods

An electronic database search was conducted using MEDLINE, EMBASE and Scopus. All databases were searched from inception to September 2013. Titles and keywords/subject headings were searched in MEDLINE and EMBASE using the concepts of alcohol use and opiate replacement therapy. Titles alone were searched in
Scopus. All searches were restricted to reports in English. MEDLINE and EMBASE searches were also restricted to those with human subjects.

Results

The search retrieved 239 titles and abstracts; 159 were unique. Titles and abstracts were screened and excluded (n=117) due to irrelevance or no empirical data. This left 42 reports for full-text review. The relevance of two could not be determined as full-texts were inaccessible (Fareed et al. 2009, Lehman, Barrett and Simpson 1990). Of the remaining 40, 26 were excluded. Studies were excluded for various reasons, e.g. no comparison between intake and follow-up, follow-up conducted after detoxification following MMT (Strain et al. 1994), and involving interventions which may affect alcohol use i.e. brief interventions to reduce alcohol use (Darker et al. 2012) and using disulfiram for cocaine dependence (Fareed et al. 2009, Lehman, Barrett and Simpson 1990, Oliveto et al. 2011, Petrakis et al. 2000). This left 14 relevant studies remaining for inclusion in the review.

One of the studies identified was a systematic review (Srivastava, Kahan and Ross 2008). An additional systematic review was identified by the research team outwith the search strategy and included (Staiger et al. 2012). These systematic reviews included eight of the studies identified by the search strategy; therefore these studies will not be discussed individually. Five further studies which did not pertain to studies included in either review were identified by the search; these studies and the two systematic reviews are summarised.

Systematic reviews (n=2)

Srivastava, Kahan and Ross 2008

This systematic review aimed to examine changes in problem alcohol use upon commencing and being maintained on methadone. They identified 15 articles pertaining to 14 study populations; 11 were conducted in the US, two in the UK, one in Italy and one in Austria. The studies comprised 12 cohort studies and three RCTs.

Of the 15 studies, nine reported no change in alcohol consumption, three supported an increase, and three (two of which used the same study population) reported a decrease. The authors highlighted that studies reporting no change or a decrease were stronger methodologically; they included three RCTs and seven prospective cohort studies. The three studies reporting an increase were all retrospective and subject to recall bias. The authors concluded that alcohol consumption likely does not change during ORT. Overall, the findings did not support an increase in alcohol consumption upon initiation of ORT.

The majority of studies included in this review were not accessible for closer review (n=8). Of the seven that were, two reported more individualised results.

Rittmannsberger et al. (2000) investigated 68 patients undergoing MMT in Austria. The number of patients reporting frequent alcohol use (i.e. >3 days/week) increased from 19% (n=13) to 33% (n=22) between baseline and follow-up. 24% (n=16) reported a decreased frequency of alcohol consumption and 34% (n=23) reported an increased frequency. With regard to the various laboratory parameters measured, the proportion of patients changing from normal to pathologic ranged from 6-21% depending on the specific parameter, and was almost equalled by the proportion changing from pathologic to normal (0-23%).
Stimmel et al. (1983) conducted an RCT of 625 individuals undergoing MMT in the US. Participants were followed up for a mean of 53.7 weeks and were categorized as active alcohol, inactive alcoholic or non-alcoholic during admission. 7% (n=28) of 399 non-alcoholic were recategorized as active alcoholics, and remission was alcoholism was noted in 27% (n=28) of those initially categorized as alcoholics.

Staiger et al. 2012

This systematic review was carried out to answer two questions: one was to determine whether alcohol could become a substitute for the primary drug(s) of choice. Eight studies addressing this question were identified. Six papers reported outcomes of large-scale longitudinal studies conducted in the Australia, Ireland, the UK and the US. This review produced mixed findings; three studies were unclear, three found no evidence to support a substitution hypothesis, one supported the hypothesis, and another supported the hypothesis in a sub-group.

The majority of studies included in this review were not accessible for closer review (n=5). Of the three that were, one reported more individualised results. The Research Outcome Study in Ireland evaluating drug treatment effectiveness (ROSIE) was a national prospective cohort study (Cox et al. 2006). The findings reported here include 305 participants recruited from both in-patient and outpatient settings and so are not limited to those in MMT. At one-year follow-up, significantly more people stopped rather than started using alcohol. 25% of individuals stopped using alcohol at 1-year follow-up and 15% started alcohol use.

Additional studies identified (n=5)

Best et al. 2002

The study examined the patterns of prescribed and non-prescribed benzodiazepine use among 100 patients consecutively attending a methadone maintenance clinic in South London. Alcohol use was assessed using the Maudsley Addiction Profile. At six months, 91% of the sample was re-interviewed and 76% at two years. The frequency of alcohol use in the 30 days prior to interview decreased from 19.2 days at baseline, to 15.9 days at six months, to 14.5 days at two years. The overall decrease from baseline to two years was significant (p<0.05) although neither the change from baseline to six months or from six months to two years was statistically significant. This study data is now quite old which should be taken into account given the policy changes that have taken place since.

Gruber et al. 2008

The primary aim of this RCT was to test the effectiveness of MMT in increasing completion of six months of TB preventive therapy. Participants were recruited from a San Francisco hospital’s 21-day outpatient methadone detoxification program. 111 individuals were randomized to one of three treatment conditions: i) a usual care control group consisting of 21-day methadone detoxification, ii) six months of MMT with minimal counselling, or iii) six months of MMT with standard counselling. Over a quarter of participants met criteria for alcohol dependence or abuse.

The mean number of days of alcohol use increased from 5.3 to 7.2 for those in detox, from 5.9 to 6.5 for minimal MMT, and 7.6 to 8.4 for standard MMT although significance testing over time was not reported.
Gronbladh and Ohlund 2011

This study compared self-reported side-effects for former heroin addicts before MMT and during MMT. 110 consecutive patients were admitted during a three month period to four treatment programmes in Sweden were asked to record the side-effects they had experienced during earlier opioid use and during MMT on a questionnaire; this included questions about high alcohol consumption.

High alcohol consumption significantly decreased from 40% to 27% (p<0.05). However, there was considerable individual variation. Of the 44 who reported high alcohol consumption prior to MMT, 61% did not report high alcohol consumption during MMT. Of the 66 who did not report high alcohol consumption prior to MMT, 20% reported high alcohol consumption during MMT. It is the latter group that are relevant to this research question as those that already had high consumption will have been identified at initial assessment.

Haasen et al. 2009

The aim of this RCT was to determine the effects of heroin-assisted treatment (HAT) on alcohol consumption. 1015 heroin dependent patients in Germany were randomized to receive HAT or MMT for one year.

Alcohol measures comprised the Addiction Severity Index composite score (ASI CS), self-reported data on alcohol use in average consumption units (CU) per day and carbohydrate-deficient transferrin (CDT) (used as a biological marker of heavy alcohol use).

With regard to ASI CS, there was no significant difference between the groups at baseline. At follow-up, there was a significant difference between the two; ASI CS decreased (i.e. improved) from 0.12 to 0.09 for those in HAT and increased (i.e. worsened) from 0.12 to 0.13 for those in MMT. Both groups experienced a reduction (i.e. improvement) in CU for which there was a significant overall time effect. There was a greater reduction for those in HAT but no significant difference between the groups. CDT measures were reduced in both groups with a stronger reduction (i.e. improvement) in the HAT group.

Novick et al. 1993

The aim of this US-based study was to assess the safety and potential health consequences of long-term MMT in 110 patients admitted between 1965 and 1968 who were still enrolled in 1980 and had received continuous treatment for 10 years. The mean length of time in treatment was 14.5 years and ranged from 11-18 years. Past abuse of alcohol was reported for 27% of participants while current abuse was reported in 13% indicating a reduction. However as a US based study from some time ago this is of limited relevance to the research question.

Methodological points

Studies were carried out in a variety of countries. Sample sizes were sufficient with several large-scale cohort studies included in the systematic reviews. Duration of follow-up varied substantially between studies. There was considerable heterogeneity in outcome measures used to assess changes in alcohol consumption which makes direct comparison between studies difficult.
Conclusion

The evidence base to assess whether alcohol consumption changes upon initiation of ORT is mixed with no strong evidence to support a change in either direction. Problem alcohol use remains an issue for a substantial proportion of patients receiving ORT and there is considerable individual variation within studies, with some participants reporting increases in alcohol use and others reporting decreases (Rittmannsberger et al. 2000, Stimmel et al. 1983, Cox et al. 2006, Gronbladh and Ohlund 2011); Given that there is some evidence to suggest an increase in some people, screening during ORT is advisable to identify individuals who increase their consumption. Additional interventions are likely to be required to reduce alcohol consumption during ORT as ORT does not appear to be effective in this respect. A recent Cochrane review assessing the effects of psychosocial interventions for problem alcohol use in illicit drug users concluded that no conclusion could be made due to the shortage of data and the low quality of the studies identified (Klimas et al. 2012); therefore further research is required to reduce problem drinking in this group.

References


