Nugget 9.1

Rapid opiate detoxification at home feasible for some patients

Findings Given suitable patients and a suitable home environment, rapid detoxification from opiates can be done at home without on-site professional supervision. A benzodiazepine is used to induce light sedation sufficient to control discomfort and prevent recall of the worst of the experience.

A study of this procedure from Spain has recorded short-term outcomes among 1368 patients detoxified before transfer to the opiate antagonist naltrexone.[1] They had been advised to avoid heroin use for at least 12 hours beforehand but failure to do so was not a contraindication for proceeding. After joint patient/carer assessment and instruction at one of two clinics, the carer was given the medication and the pair returned home for the rapid withdrawal phase of the treatment. This entailed oral administration of naltrexone to precipitate withdrawal, of midazolam to induce light sedation, and of clonidine and other drugs to control withdrawal symptoms. The procedure was supervised by the family member who maintained close telephone contact with the medical team. Typically patients were rousable and could walk with assistance but were confused and restless for 4–6 hours after first taking naltrexone. Vomiting and diarrhoea were the most common withdrawal effects (each experienced by under 15% of patients) but by 24 hours symptoms were moderate. All but 24 patients were managed entirely at home. The 24 taken to hospital generally required only advice and reassurance and at most brief admission for rehydration. All but three patients returned to the clinic the next day to start their longer-term course of naltrexone.

In context Unlike conventional procedures, rapid withdrawal generally results in virtual 100% completion and (if this part of the treatment plan) induction on to naltrexone. The featured study shows that these results can also be achieved at home at a fraction of the cost of a conventional inpatient procedure or of rapid detoxification under deep sedation or anaesthesia. However, the results must be seen in the context of a relatively young patient group whose drug and other

problems were not at the level commonly seen in Britain and who were in close contact with their families, many (if not most) of whom had the resources to use the private clinic. Typically patients were taking modest doses of heroin and smoking the drug, meaning that they were absorbing lower amounts than the same dose injected. Patients dependent not just on heroin but also on cocaine, alcohol or benzodiazepines were excluded from the study. Heavy alcohol or benzodiazepine users who have become tolerant to these drugs may have required inpatient admission to ensure adequate but safe dosing of the benzodiazepine component of the treatment. Well over twice as many patients seen at the clinics opted instead for inpatient detoxification, an indication that the study dealt with a selected if substantial minority. After the study the clinics introduced octreotide which attenuates vomiting and diarrhoea but which must be injected. If home detoxification can be started immediately this can be done at the clinic, but the medication has also been administered by trained family members.

The Spanish procedure is similar to that trialed successfully in Australia on a general medical ward, an alternative for patients unsuitable for home detoxification but which avoids the need for intensive care and specialist nursing – see *Additional reading*. This work also shows that the procedure is feasible for patients leaving methadone maintenance. However, rapid procedures of any kind have yet to demonstrate that their main short-term advantage over conventional detoxification (virtually 100% completion and induction on to naltrexone) carries through to a higher proportion of patients maintaining long-term recovery. Much seems to depend on the availability of intensive clinical and social support.

Practice implications Light sedation avoids two of the major disadvantages of deep sedation or anaesthesia: the risk of serious complications if procedures are sub-standard, and the high cost of intensive care. What they leave is the risk (one attached to any procedure entailing loss of tolerance) of relapse leading to fatal overdose. Minimising this risk and deciding when patients should be advised that entering or continuing with substitution treatment is the safer option are the key clinical tasks. Patients whose circumstances and motivation might have caused them to drop out from conventional detoxification will complete rapid detoxification and lose their tolerance to opiate drugs, but may also be the ones who disproportionately risk subsequent relapse. Until naltrexone implants prove a suitable alternative, such patients will require a high level of clinical and social support. On the other hand, it seems likely that patients whose supportive family/social network make home detoxification feasible will also be the ones most likely to receive the support needed to keep taking naltrexone and/or to avoid a return to opiate use. Ensuring support is available will limit the range of suitable patients and potentially add considerably to the costs of what seem inexpensive procedures. Bearing these cautions in mind, there seems no reason why rapid home detoxification should not take its place among the range of detoxification options for a limited group of patients. Pri,arilty these will be relatively low-dose heroin users not also dependent on benzodiazepines or alcohol who have suitable home environments with family/frinds who can be trusted to closely monitor their progress and respond appropriately. Ideally they will also be willing to be trained to inject anti-nausea medication but this could also be arranged with the clinic. Replacing clonidine with lofexidine will reduce potential complications from low blood pressure such as collapse and injury.

Featured studies Carreño J.E. *et al*. "24-hour opiate detoxification and antagonist induction at home – the 'Asturian method': a report on 1368 procedures." *Addiction Biology*: 2002, 7, p. 243–250. Copies: apply DrugScope.

Additional reading Glasgow N.J. *et al*. "Accelerated withdrawal from methadone maintenance therapy using naltrexone and minimal sedation: a case-series analysis." *Drug and Alcohol Review*: 2001, 20, 2 p. 13–22. Copies: apply DrugScope.

Contacts Colin Brewer, Stapleford Centre, 25A Eccleston Street, London SW1W 9NP, England, 020 7823 6840, dr.brewer@staplefordcentre.co.uk.

Thanks to Dr William Shanahan of the Kensington and Chelsea Drug Treatment Centre for his comments.

Links Nugget **7.1**

Appendix to Nugget 9.1

For a review of earlier work see Nugget 7.1 and supporting notes. Only later studies are included here.

About the featured study

The results of the featured study are impressive but must be seen in the context of a society and a patient group where close family contact seems common[2] and whose drug and other problems were not at the level commonly seen in Britain. Typically the patients were young men (average 26 years) with a relatively short history (average five years) of opiate dependence. All but a few were heroin users and of these two-thirds used half a gram or less a day, modest doses given that 7 in 10 smoked the drug. Casual users of alcohol, benzodiazepines or cocaine were not excluded but presumably dependent users were, an important factor since the benzodiazepine doses used might have been inadequate for patients tolerant to these drugs. For these patients inpatient admission may de required to ensure adequate but safe benzodiazepine dosing, a consideration which would exclude many British heroin addicts from a home-based procedure. Apart from their drug problem, on average patients were not experiencing severe problems in the rest of their lives, though half were unemployed. Probably most were processed through the private clinic,[3] implying a degree of family support and financial resources unavailable to many British addicts. During the period of the study well over twice as many patients seen at the clinics had opted instead for conventional inpatient detoxification, an indication that the study dealt with a substantial but selected set of patients who might differ from the normal run of detoxification applicants.

Another reason why inpatient admission may be preferred is that it permits the detoxification phase to be followed by a naltrexone implant giving long-term protection against relapse.

Including those reported on in the study, over 3000 patients have been treated using this procedure with, the authors report, no significant complications. Since the study period the authors have replaced loperamide (blocked by naltrexone) with octreotide to control vomiting and diarrhoea. Octreotide must be injected. This can

be done at the clinic during the assessment if the family is able to quickly start detoxification but can also been administered by trained family members.

Costs per patient were estimated at £140 but detailed costing is not provided. Costs must be fraction of the cost of a typical inpatient procedure or of deep sedation or anaesthesia requiring inpatient admission.

Light sedation in hospital

The procedure is similar to that trialed in Australia on a general medical ward using routine nursing care.[4 5] The two studies show that the procedure is feasible not only for active heroin addicts but also as an exit route for patients wishing to leave methadone maintenance, though median methadone doses were modest (42.5mg daily). They also provide a model for a procedure which avoids the need for intensive care and specialist nursing yet caters for patients who require a higher degree of medical supervision than can be achieved at home. Patients generally stayed one night only and rated the experience acceptable and better than reducing doses of methadone. The second study confined itself to stabilised patients leaving methadone treatment.[6] At three months illicit drug use was no less than it had been whilst the patients were on methadone but 10 of the 14 were managing to avoid a return to dependent heroin use without having to return to methadone maintenance. However, across the two studies the dangers of any treatment entailing loss of tolerance were apparent in two overdose deaths among 44 patients and near misses in two other cases.

Other recent studies

Another Australian study compare long-term outcomes of naltrexone maintenance started either after rapid inpatient detoxification under anaesthesia or after conventional inpatient detoxification lasting up to eight days and relying on clonidine and other drugs to ameliorate symptoms.[7] The balance may have been tipped against the conventional option as nearly all the 101 participants randomised to the treatments wanted rapid detoxification and some seem to have joined the trial in order to access this option. Following withdrawal, both groups were offered nine months of naltrexone treatment and supportive counselling. Withdrawal was completed and naltrexone treatment initiated by just 14 of the 50 conventional patients compared to 40 of the 50 rapid patients. Within the first three months this advantage translated into better retention on naltrexone. At six months there was significantly less heroin use after rapid detoxification but by 12 months both groups had made substantial but equal reductions in use. At this time hair samples showed that about a third were abstinent but 42 subjects could not be tested. If all were using heroin the abstinence rate would have been just 16%. Most of those who could be traced had within the year of the study entered some kind of follow-on treatment other than the counselling offered by the detoxification clinic, generally methadone maintenance. After the study had ended three subjects died from heroin overdose. Being younger and having a lower level of dependence were predictors of abstinence at six and 12 months. This study suggests that given relatively low levels of support after detoxification (monthly counselling) rapid detoxification's advantage in starting more people on naltrexone does not translate into better long-term outcomes.

An interim report from another US trial also emphasised the need for intensive support from clinicians and carers and commitment from the patient if naltrexone maintenance is to succeed as an alternative to methadone maintenance.[8] It also suggested that patients pre-stabilised on methadone maintenance do best. At three months after detoxification, half were still on naltrexone and no longer regularly using opiates.

Interim results from a US trial comparing three methods of detoxifying heroin addicts as inpatients prior to naltrexone maintenance also suggest limited long-term gains from rapid procedures.[9] Withdrawal was either precipitated under anaesthesia, controlled by buprenorphine, or controlled by clonidine. Nearly all patients completed the first two procedures and started naltrexone compared to just a quarter in the third. During the 12 weeks of relatively intensive aftercare (twice weekly relapse prevention) none of the patients maintained virtual heroin abstinence after clonidine and just three each (out of 17 and 18) in the other two groups.

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1 Carreño J.E. *et al*. "24-hour opiate detoxification and antagonist induction at home – the 'Asturian method': a report on 1368 procedures." *Addiction Biology*: 2002, 7, p. 243–250..

2 Very few patients were excluded because of lack of suitable family support.

3 It handles 25%of the area's's detoxifications compared to 15% for the public clinic.

4 Bell J.R. *et al*. "A pilot study of naltrexone-accelerated detoxification in opioid dependence." *Medical Journal of Australia*: 1999, 171, p. 26–30.

5 Glasgow N.J. *et al*. "Accelerated withdrawal from methadone maintenance therapy using naltrexone and minimal sedation: a case-series analysis." *Drug and Alcohol Review*: 2001, 20, 2 p. 13–22.

6 Glasgow N.J. *et al*. "Accelerated withdrawal from methadone maintenance therapy using naltrexone and minimal sedation: a case-series analysis." *Drug and Alcohol Review*: 2001, 20, 2 p. 13–22.

7 McGregor C. *et al*."A comparison of antagonist-precipitated withdrawal under anesthesia to standard inpatient withdrawal as a precursor to maintenance naltrexone treatment in heroin users: outcomes at 6 and 12 months." *Drug and Alcohol Dependence*: 2002, 68, p. 5–14.

8 Saunders J.B. *et al*. "Comparison of rapid opiate detoxification and naltrexone with methadone maintenance in the treatment of opiate dependence." *Drug and Alcohol Dependence*: 2002, 66, S2-S202, p. S156.

9 Collins E.D. *et al*. "Randomized comparison of buprenorphine, clonidine and anesthesia-assisted heroin detoxification and naltrexone induction." *Drug and Alcohol Dependence*: 2002, 66, S2-S202, p. S35.