

Treatment Response of Opium Smoking Hmong Refugees to Methadone Maintenance

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Abstract

Objective: To examine the outcome of methadone maintenance in opium dependent Hmong refugees.

Methods: Medical records were searched for Hmong patients in methadone treatment between 01/1995 and 09/1997. Patient's progress was assessed over nine months.

Results: 44 Hmong patients were found. Data was available on 40 patients, mean age 47.7 years, 33 males/7 females. At admission 100% met the DSM-IV criteria for Opium Dependence, 75% Major Depressive Disorder and 68% PTSD. Patients showed marked improvement by having mostly negative urine drug screens, improvement on Addiction Severity Index and 70% being highly successful on outcome criteria modified by Drug Abuse Research Project over 9 months.

Conclusions: These findings suggest that opium dependent Hmong patients can show marked improvement while in methadone maintenance program. Prospective controlled studies are warranted.

INTRODUCTION

Opium addiction is common in certain Asian populations. Among the fourteen countries with serious narcotic problems, six are in Southeast Asia (1). The prevalence rates of opiate addiction in Southeast Asia is 8–12% among opium farmers, 6–8% among groups involved in opium commerce, and 3% among groups not exposed to opium production or commerce (2,3). The Hmong people in United States were inhabitants of Laos. In Laos the Hmong are considered premier opium

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farmers who cultivate opium for financial benefit and where opium can be found in almost every home (4,5). Treatment of opium addiction in Laos consists primarily of detoxification (6,7). Rates of long term abstinence following treatment are unknown.

Since 1970 more than 166,000 Hmong refugees have migrated to the USA from the refugee camps in Thailand. Large populations have settled in California, Minnesota, Colorado and Washington. Currently, there are 60,000 Hmong settled in Minnesota creating the largest urban Hmong population in the world (8). Based on rates of addiction in Laos, it is estimated that at least 2–5% of these refugees are regular users of opium. Methadone maintenance is an effective treatment for opioid dependence (9–13), yet little has been reported about the post migration response of opium dependent Hmong refugees to methadone maintenance in the United States.

METHODS

This is a retrospective study consisting of available data from 40 of the 44 opium dependent Hmong refugees living in Minnesota who were admitted to a hospital based methadone program in Minneapolis between January of 1995 and September of 1997. Patients were rated at admission with translated self-rating scales and interview instruments which included the Symptom Checklist 90 (SCL 90), Hamilton Depression Scale (HAM-D), Hamilton Anxiety Scale (HAM-A), Zung Depression Scale (ZUNG), the Hmong/American Acculturation Scale, the Drug Impairment Rating Scale (DIRS) and the Addiction Severity Index (ASI) (14,15,16,17). In addition, all patients underwent a diagnostic evaluation by a psychiatrist certified by American Society of Addiction Medicine (ASAM). Patients with current psychiatric disorders were provided pharmacotherapy and psychiatric medications were dispersed with their methadone. Urine drug screens were taken randomly, approximately every ten days and tested for the presence of opiates, methadone, amphetamines, barbiturates, cocaine, and benzodiazepines (18,19). Falsification of urine specimens was controlled by direct observation of the patient and specimen temperature measurement (range 91.4–95.2 degrees F.). Patients attended the program daily (Monday through Saturday) and were case managed by a bilingual Hmong staff person with many years of experience as a methadone counselor. ASI scores were reviewed retrospectively for accuracy by the authors.

THE SAMPLE

During the initial three months, four patients left the program (two relocated out of state, one dropped out unexpectedly, one died due to natural causes) and were not included in this analysis. Forty patients included in the study consisted of 33 men and 7 women. All were self-referred and had been approved for treatment by a community based Hmong service agency. On admission, mean age was 47.7 years (range(r) = 27–86). Age of initial opium use was 22.3 years (r = 10–73), the total years of using opium three or more times a week averaged 16 years (r = 2–62) and mean years in refugee camps was 4.61 years (r = 1–11). Opium “Pipes” smoked per day during the month prior to admission averaged 105 (r = 25–180).

TABLE 1.

Patient Characteristics

Item	Mean (Range) N = 44
Age	47.7 years (r = 27-86)
Gender	33 males, 7 females
Married	93%
Employed	27%
Military service	77%
Age 1 st use	22.3 (r = 10-73)
Years use	16 (r = 2-62)
Pipes/day	105 (r = 25-180)
Number of past treatments	1.1 (r = 0-2)

*r = Range.

At admission, 100% met the DSM IV criteria for opium dependence, 75% for major depressive disorder, and 68% for post-traumatic stress disorder (PTSD) (20-23). In addition, Symptom Checklist 90 scores indicated significant psychological distress. Hamilton Depression Scores averaged 28.6 (r = 17-44), Hamilton Anxiety scores averaged 26.2 (r = 16-41), Zung Depression scores averaged 40.5 (r = 22-65). The mean Drug Impairment Rating Scale score was 34.1 (r = 20-46) and Addiction Severity Index Composite score was 3.9 (r = 2-7). The mean Global Assessment of Functioning (GAF) score at admission was 55.9 (r = 40-70). The mean scores of the Acculturation Scale (1 low-5 high) for Hmong cultural affiliation was 3.4 (r = 2-5) and for American cultural affiliation was 1.94 (r = 1-3) (24,25). All patients exclusively smoked opium. There was no self-reported use of other drugs or use by injection. All patients were HIV negative. However, 36% of the patients were Hepatitis C Virus (HCV) antibody reactive (26-28).

RESULTS

The patients were rated at nine months post admission on number of random urine drug screens positive for other drugs, the Addiction Severity Index, and a

TABLE 2.

Rating Scales: Mean Scores at Admission

Instrument	Mean Score	Range
Addiction severity index (ASI) composite	3.9	2-7
Hamilton anxiety scale	26.19	16-41
Hamilton depression scale	28.6	17-44
Zung depression scale	40.5	22-65
Acculturation scale		
Hmong affiliation	3.4	2-5
American affiliation	1.94	1-3
Drug impairment scale	34.1	20-44
GAF	56.6	40-70

TABLE 3.

SCL-90 Scores at Admission

Symptom Checklist 90	Mean Score	Range
Somatization	1.9	0.8-3.1
OBS/Compulsive	2.12	0.5-4.0
Depression	1.88	0.7-3.3
Anxiety	1.92	0.5-3.2
Hostility	1.89	0.5-2.7
Phobic	1.78	0.3-2.9
Paranoid	1.88	0.5-3.7
Psychotic	1.77	0.4-2.9
Additional	2.05	0.7-3.1

categorical rating system modified on criteria originally established by the Drug Abuse Research Project (DARP).

Of 814 urine specimen tested, 125 (15%) were positive for other drugs, almost exclusively opiates. The vast majority of the specimens were positive (85%) during the initial three months of treatment. Each patient averaged 27 urine screens with only four specimens positive during the nine-month period.

The admission ASI ratings were compared to ratings at 9 months post admission (29-32). The student t-test was used to determine statistically significant differences. The most significant improvement occurred in ASI sub scales of employment/support status changing from 4.4 at admission to 1.5 at nine months ($p < .01$), drug use from 8.9 at admission to 4.6 at nine months ($p < .01$), family/social relationships from 4.5 at admission to 1.7 at nine months ($p < .01$), and psychiatric status from 6.2 at admission to 4.5 at nine months ($p < .01$). The ASI composite score improved from 3.9 at admission to 1.7 at nine months ($p < .01$).

The patient's case manager rated patients status every 90 days according to a categorical rating system modified on criteria originally established by the Drug Abuse Research Project (DARP). At nine months 70% (28) of patients met criteria

TABLE 4.

ASI Subscale Scores (At Admission and at 9 Months Treatment)

ASI sub scale	Mean at Admission	Mean at 9 Months	p<
Medical status	2.7	2.2	ns*
Employment/Support status	4.4	1.5	<.01
Alcohol use	0	0.1	ns*
Drug use	8.9	4.6	<.01
Legal status	0.3	0.3	ns*
Family/Social relationships	4.5	1.7	<.01
Psychiatric status	6.2	4.5	<.01
Composite	3.9	2.1	<.01

*Not significant.

TABLE 5.

DARP Criteria Outcomes

Outcome Category	Percent (N = 40)
Highly successful	70% (28)
Moderately successful	15% (6)
Moderately unsuccessful	5% (2)
Highly unsuccessful	10% (4)

- Highly Successful (HS): No known drug use or positive urine drug screen. Functioning as parent, homemaker, and student. Employed or looking for work. No criminal activity.
- Moderately Successful (MS): Less than 25% of urinalyses (UAs) positive for other drugs. Generally functioning as parent or homemaker, employed or looking for work. No significant criminal activity.
- Moderately Unsuccessful (MUS): Greater than 25% but less than 50% of UAs positive for other drugs. Marginal functioning, not looking for work. May be involved in criminal activity.
- Highly Unsuccessful (HUS): More than 50% of UAs positive for other drugs. Not functioning as parent, homemaker, and student. Unemployed, not looking for work. Criminal activity.

for being “highly successful”, 15% (6) for “moderately successful”, 5% (2) for “moderately unsuccessful” and 10% (4) for “highly unsuccessful”. At nine months post admission to treatment, the majority of patients had become abstinent from opium and had improved markedly in employment/support status, family and social functioning, and psychiatric status.

DISCUSSION

The positive response to methadone treatment in this group of patients was due to multiple factors. The most significant change was in the abstinence from opium and improvement in social functioning. The majority of patients improved their employment and support status, family and social functioning, and *psychiatric status*. The fact that the patients exclusively smoked opium and did not have a history of other drugs and alcohol use including intravenous drug use was likely a significant contributor to the positive outcome. The availability of onsite psychiatric care undoubtedly was also a key factor in the patients overall improvement.

Other factors that likely influenced the positive outcome include involvement of the family/clan in treatment, lack of legal problems, close monitoring for return to opium use and compliance with methadone and psychotropic medications. While the average daily dose among Hmong patients was low (45 mgs) compared to non-Asian patients, the milligram-per-kilogram ratio was not statistically different. As a condition of admission to treatment, the patient’s family/clan members played a significant role via regular, two-way communication with the patient’s case manager. Family members were encouraged to be supportive of the patient’s abstinence from

opium and to report to the case manager any use of opium or other drugs by the patient. This "therapist/clan" contract is believed to have been an important factor in the positive outcome.

The severity of addiction and addiction related impairment was high, as was the rate of co-occurring psychiatric disorders. The high degree of major depression and PTSD was replication of the previous studies as Kroll et al. (1989) found 80% prevalence of major depression among the Hmong in a community mental health clinic (33). Similarly Moore et al. (1991) found high rates of PTSD and depression among Mein patients from Laos in their clinic (34). There can be several factors which might have contributed to high rates of PTSD and major depression. The Hmong had either continuous or intermittent traumatic experiences during the war in Laos. Many had years of invasion by the soldiers, with interrogations, threats and indiscriminate killings. Most of them had terrifying escapes from Laos. Often families were separated, as adults and children ran through the jungles in chaos. Many were wounded or killed. Those who succeeded in escaping settled in temporary refugee camps in Thailand that offered extreme crowding and limited food, water, and clothing. Those that managed to migrate to United States faced the further challenges of acculturation, unemployment and poverty.

The high rate of HCV antibody reactivity (36%) was unexpected given the absence of obvious risk factors. Practices in Southeast Asia such as the reuse of syringes in medical settings and infected blood transfusions may account for the HCV exposure.

While there was significant concern about the potential for diversion of methadone within the Hmong community, this proved not to be a problem. This may be due to an emphasis in educating patients about the responsibilities and risks inherent in take-home methadone and in contracting with patients and clan members to maintain secure storage and medication safety precautions.

The ability to generalize this study to other settings is limited by the small number of patients as well as the range of services not always available in other methadone programs. In this study data for different psychiatric scales regarding depression, anxiety and acculturation was available only on admission. It will be important for the future studies to look at the improvement in these scales prospectively with psychiatric treatment and their relationship with methadone treatment outcome. Other limitation in this study includes lack of comparison group. Future studies should include larger samples with comparison group, multiple sites, and treatment outcome assessed over longer period of time.

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