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SCOPE & MISSION OF THE CJA

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Le Journal Canadien d’Addiction (JCA)

This last September 2013, I submitted our Journal’s edition on Medical Marihuana for “peer review” at the meeting of the International Society of Addiction Journal Editors (ISAGE) which currently represents 42 journals. Of the many constructive comments I received, one particularly stuck with this tri-lingual editor “how come you do not have a French title on your front page?”… “touché!” So here it is, duly corrected we hope. Thanks to Drs. Brissette, Morin and Nadeau who helped me navigate the selection of a translation for “Addiction”.

A quality journal needs a strong and active editorial board as well as dedicated peer reviewers. In addition to our current solid group of editors, you will note in the editorial masthead a number of additions. It is my pleasure to welcome four new members who are well recognized Canadian scientists, each with an impressive track record in our field.

David C. Hodgins, Ph.D., is a professor in the Program in Clinical Psychology in the Department of Psychology, University of Calgary. He is also the Head, Department of Psychology and a coordinator with the Alberta Gaming Research Institute. His research interests focus on various aspects of addictive behaviours including relapse and recovery from substance abuse and gambling disorders. He and several of his trainees are recipients of several international awards. His list of publications includes a recent review of gambling for the Lancet.

Louise Nadeau, Ph.D. M.A., is full Professor in the Department of Psychology at the Université de Montréal and associate researcher at the Douglas Mental Health University Institute, University McGill. Dr. Nadeau’s multicentric and transdisciplinary focuses on the prevention of recidivism among high risk drivers, on gambling epidemiology, and in particular on co-occurring disorders. She is the Chair of the Working Group on Online Gambling for the Minister of Finances, Gov. Québec (2010-2013) and serves on several boards. From 2000-2006, she served as Vice-chair of the Canadian Institutes of Health Research Governing Council. Dr. Nadeau was awarded the Prix du Québec Marie-Andrée Bertrand in 2012, the most prestigious award attributed by the Gov. of Québec in science, as well as other well recognized awards.

Brian Rush, Ph.D., is Scientist Emeritus and former head of the Health Systems and Health Equity Research Group at the Centre for Addiction and Mental Health (CAMH) and Professor in the Departments of Public Health Science and Psychiatry, University of Toronto. Building upon 37 years of work in the addiction and mental health fields, Brian now provides consultation and technical support to several research and development projects related to needs assessment, epidemiology, program evaluation and performance measurement, and treatment system design. He is a well recognized consultant to the WHO and other international bodies.

Evan Wood, MD, is an internal medicine and addiction medicine physician at St. Paul’s Hospital in Vancouver and the Medical Director for Community Addiction Services for Vancouver Coastal Health. He is also a clinical epidemiologist and Professor of Medicine at the University of British Columbia where he holds the university’s Canada Research Chair in Inner City Medicine. His list of publications includes articles in the New England Journal of Medicine and other prestigious publications.

We look forward to their contribution and that of their co-investigators and trainees to our national publication. Our list of peer reviewers includes members of the Editorial Board as well as CSAM Board members. I would also like to recognize the addition of Drs. Ron Lim, our new CSAM President, as well as Drs. Sam Oluwadairo and Wael Shublaq on our masthead. Peer reviewers perform a critical and by necessity an anonymous function for our Journal and their dedicated contribution is the backbone of our quality assurance.

Now to the first issue for 2014! It is this time a privilege to introduce an invited editorial by Mr. Len Blumenthal. Mr. Blumenthal has been a pillar of our field in Canada for many years. He has assumed various leadership positions including past CEO of AADAC in Alberta. He has also received the honour to be selected to serve on the Board of Alcoholics Anonymous in New York. I have also always appreciated his support of the development of Addiction Medicine and was made an Honorary Member of our national Society at its meeting in Banff in 1995. His editorial “Why not AA?” is sure to make us rethink the contribution of this important group. Comments will as usual be welcomed!

The other contributions include two original clinical studies. One from Dr. Loslier et al reports on a medication trial of hepatitis C among patients receiving opiate substitution. The second clinical report from Dr. Cernovsky et al further investigates the components of sleep disorders which is so critical during our patients’ recovery. Last, but not least, as our patients continue to be challenged by the taper process from benzodiazepines, Drs. Galperyn et al share a step-wise CBT approach to support patients in their recovery.

Hoping that this edition will be of help to our clinical practices.

Yours truly,

Nady el-Guebaly MD, FRCPC
Editor-in-Chief, CJA
Why Not AA?

Leonard Blumenthal, LLD (Hon)

Dr. Blumenthal is a Past President/CEO of the Alberta Alcohol and Drug Abuse Commission and Past Chair (non-alcoholic) of the General Services Board (Board of Directors) of AA for USA/Canada

For many years, professional care-givers, including physicians, have attempted to deal with individuals who were addicted to various substances and/or self-destructive behaviors. The most obvious and pervasive has been the overuse, misuse and abuse of alcohol and the resulting problems ensuing from that addiction. Indeed, many other addictions often arise and grow as a result of bad decisions that individuals make while drinking.

While professionals have utilized a variety of therapies in treating addictions, nothing has yet emerged as being the ideal to not only arrest the progression of alcoholism but to prevent relapse in a consistently predictable manner. The other problem is that the professional has a limited time to allot to treating this illness and must, at some point, move on to treat others. Usually, while professionals are very good at getting individuals sober initially, they are not able to devote the time and effort to keep them sober.

When I was a relative newcomer in the treatment of addictions, it soon became apparent that I could only take an individual so far along in recovery before I had to turn them loose or refer them on. But, to what? It should be something that would protect and enhance the time and effort already expended. That turned out to be Alcoholics Anonymous (AA).

I had spent considerable time analyzing AA to determine how and why it worked. While doing this, I attended many meetings but no clear reasons for its success emerged. What did emerge, however, was that those who were involved stayed sober and that in itself had to be good enough!

Since AA was founded in 1935, it has not changed its purpose. Its singular purpose is to assist alcoholics in their continuing recovery from alcoholism with no other distractions or “outside issues”. Thus, and much to the consternation of many professionals, it takes no position in any debates, does not deal with any other addictions, and does neither education nor research. The only requirement for membership is an individual’s sincere desire to stop drinking alcohol.

Individuals addicted to other substances or behaviors are encouraged to form and conduct movements to combat those specific addictions. Many have, with AA’s permissions, utilized the same 12-step structure as AA. To date, more than 300 ‘Anonymous’ organizations have requested and been granted permission to establish their program in order to combat their specific addiction. This too allows AA to focus only on individuals whose problems are associated with alcohol. At present, there are over 60,000 groups in Canada/USA with approximately 2 million members. AA is now available in over 180 countries with materials available in 80 languages.

Anonymity is another issue that is often misinterpreted and misunderstood. Many assume that members remain anonymous because of past behaviors associated with excessive and inappropriate drinking. AA as an organization is not anonymous and is not hiding from anyone or anything. Its meetings and activities are widely known and advertised. Even non-members are welcomed and encouraged at open meetings. In fact, the personal identity of its members is the only information that is not available.

Personal anonymity at the public level is practiced by all members. The rationale given for this is that it is an effective way of keeping individual egos in check. AA’s financial activities are also often misunderstood. Only members can contribute when collections are taken at meetings. Non-members cannot contribute financially in any way at any time, including grants from governments or corporations. Thus, AA does not compete with any other agency or organization for funds.

There have been some very positive changes that AA has experienced since its beginning. When I first was exposed to AA nearly 50 years ago, membership was almost exclusively made up of middle-aged Caucasian males. The membership now includes both sexes, the whole age-spectrum, and is totally multi-lingual and multi-racial. The other major change is that almost all meetings are smoke-free. Although often labeled a self-help movement, it is in reality a mutual-aid programme involving sponsors, coaches and mentors.

Over the years, there have been many critics of Alcoholics Anonymous. Some have thought it to be too religious, others, too secretive, and yet others who feel it is too rigid in not accepting any and all addictions. Some
professionals have difficulty understanding how a group of lay people can be successful where professionals have not. In fact, one-third of its General Service Board (Board of Directors) is composed of non-alcoholics from various professions such as medicine, clergy, judicial, finance, corrections, etc.

We are continually being reminded that funds for health care are scarce and costs are spiraling out of control. We are also being urged to use new models such as primary care networks which combine assorted professionals with agencies and community groups. Common sense dictates that we should use a free, already established service like AA to assist in getting people sober and keeping them that way and thereby protecting the investment made in the early stages of their recovery from alcoholism.

It is hard to argue with several million individuals who are happy in their sobriety and free from their addiction. Be brave and experience their joy with them! Check out www.aa.org

Sleep of methadone patients and their urine screening tests

Zack Cernovsky, PhD, Gamal Sadek, MD, Simon Chiu, MD, PhD
Department of Psychiatry, University of Western Ontario

Etiology of sleep disturbances in the methadone maintenance treatment (MMT) population may include a complex interplay of factors such as concurrent psychiatric illness and benzodiazepine abuse. A high prevalence (84%) of sleep disorders in MMT patients was reported by Stein et al. It is not uncommon for MMT patients to experience sleep apnea. Wang et al compared polysomnographic data of 25 male and 25 female MMT patients to 20 normal control subjects matched to the patients for age, sex, and body mass index. Central sleep apnea was present in 30% of MMT patients: their central apnea index (CAI) was above 5. All of the normal control subjects had no sleep apnea (CAI < 1).

Peles, Schreiber, and Adelson evaluated scores of 101 MMT patients on the Pittsburgh Sleep Quality Index (PSQI) and determined that 75.2% suffered from impaired sleep. PSQI scores were higher in patients with urine positive for benzodiazepines. In a study of Oyefeso, Sedgwick, and Ghodse, MMT patients were more likely than controls to report difficulty initiating sleep, difficulty maintaining sleep, and inadequate sleep quality.

Our study examined the relationship of sleep problems in methadone patients to frequency of their concurrent drug abuse as evidenced via urine tests.

METHOD

Results of urine screening tests for opiates, cocaine, and benzodiazepines were available for 56 outpatients in a Canadian urban methadone maintenance clinic (age from 19 to 55 years, mean age 34.0, SD=9.0, 34 men, 22 women). The results of their repeated urine screening tests for opiates, cocaine, and benzodiazepines were available for the preceding 8 weeks. These tests were random but at least on a weekly basis (8 to 16 times in the 8 weeks) in all except in 2 of the patients as these two were admitted only less than 8 weeks ago: one of these two had so far only 2 tests and the other only 6 tests. None of our patients refused or missed the random tests. The average number of tests per patient was 11.5 (SD=3.9). We have quantified the urine test results as % positive = positive tests divided by the total N of tests, calculated separately for each of the three tests, i.e., the one involving opiates, another one for cocaine, and yet another for benzodiazepines.

The methadone dose in this group ranged from 3 mg to 95 mg, with the average at 48.7 (SD=25.0). Patients on dose below the usual therapeutic levels for maintenance treatment were those who opted for methadone tapering with abstinence as their desired long term goal. The dose was not significantly correlated with age and gender (p>0.05). Only 5 of the 56 patients were concurrently on other prescribed psychiatric medication: 4 were on quetiapine 50 mg and one was on trazodone 50 mg.

Our patients were asked to rate how much they were distressed by their sleep problems within the last 7 days, on a scale from 0 to 4 (0=not at all, 1=a little bit, 2=moderately, 3=quite a bit, 4=extremely), separately for each of the following three sleep symptoms: problems falling asleep, early morning awakenings, and restless or disturbed sleep. Subsequently, a correlation matrix of Pearson coefficients was calculated of these 3 sleep variables to the results of urine tests.

RESULTS

Only 23.2% of patients reported no sleep problems within the last 7 days. Restless or disturbed sleep was reported by 64.3% of the 56 patients, problems falling asleep by 62.5%, and early morning awakenings by 53.6% of the patients, see the details in Table 1.

TABLE 1: SLEEP SYMPTOMS WITHIN LAST 7 DAYS (N=56)

<table>
<thead>
<tr>
<th>Problems falling asleep</th>
<th>Early morning awakenings</th>
<th>Restless or disturbed sleep</th>
</tr>
</thead>
<tbody>
<tr>
<td>Not at all</td>
<td>37.5%</td>
<td>46.4%</td>
</tr>
<tr>
<td>A little bit</td>
<td>16.1%</td>
<td>17.9%</td>
</tr>
<tr>
<td>Moderately</td>
<td>14.3%</td>
<td>16.1%</td>
</tr>
<tr>
<td>Quite a bit</td>
<td>10.7%</td>
<td>12.5%</td>
</tr>
<tr>
<td>Extremely</td>
<td>21.4%</td>
<td>7.1%</td>
</tr>
</tbody>
</table>

Almost half (48.2%) of the MMT patients rated at least one of the 3 sleep disorder symptoms as above the level of “moderate” distress.

None of the three sleep variables significantly correlated with age and gender (p>.05, 2-tailed).

Those with problems falling asleep had significantly more often positive tests for benzodiazepines ($r=0.26$).

In our clinic, those on a higher methadone dose were usually at an earlier stage of recovery from their addiction. The methadone dose was uncorrelated with sleep disorders, except for early morning awakenings: those complaining of a too early termination of sleep were somewhat more likely to be on a higher dose of methadone ($r=0.28$). Those indicating that they were “quite a bit” or “extremely” distressed by excessively frequent morning awakenings were on an average dose of 63.2 mg (SD=23.7, N=11), compared to an average dose of 46.6 mg (SD=23.2, N=25) of those without this sleep problem.

DISCUSSION

Our data are consistent with findings by Peles et al as well as with those by Oyefeso et al: sleep quality in MMT addicts is generally poor. In Peles’s study, 75.2% of patients were classified as poor sleepers by the Pittsburgh Sleep Quality Index. In our study, 76.8% of patients reported at least one of the following: delayed sleep onset, early awakenings, or restless or disturbed sleep. The proportions of poor sleepers in the two studies are very similar, involving approximately ¾ of MMPT patients.

In our sample, cocaine abuse was associated with delayed sleep onset, perhaps due to either stimulating effects of cocaine or to sleep onset insomnia associated with cocaine withdrawal. Sleep problems were also more frequently reported by patients who abused benzodiazepines. Some clinicians might question if such sleep complaints are an attempt by these patients to justify the ongoing abuse of benzodiazepines.

Our study is a retrospective analysis of data from clinical files. Prospective methods such as those based on sleep diary data are needed. As sleep disorders are also common in patients with chronic pain, and pain symptoms are not infrequent among MMT patients, future research is needed with a focus on the contribution of chronic pain to impaired sleep in this psychiatric population.

REFERENCES


Acceptability and feasibility of a hepatitis C virus infection treatment of patients receiving opiate substitution in a family medicine clinic

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Objectif L’objectif de cette étude était d’évaluer une approche de traitement de l’infection par le virus de l’hépatite C (VHC) en première ligne chez des patients suivis en traitement de substitution pour la dépendance aux opiacés (TDO).

Devis Le devis employé est une série de cas.

Déroulement L’étude s’est déroulée dans une clinique de médecine de famille de la région de Montréal, Québec, Canada.

Participants Au total, seize patients suivis en TDO ont amorcé un traitement de leur infection par le VHC.

Variables L’acceptation initiale, l’observance au traitement, la satisfaction des patients et de l’équipe médicale ainsi que les taux de réponse virologique ont été mesurés.

Résultats Soixante-dix pour cent des patients ont accepté de suivre le traitement pour le VHC. Le taux d’adhérence au traitement a été de 99%. Treize des 16 patients ont complété l’ensemble du traitement tel que prévu. Une réponse virologique soutenue a pu être confirmée chez 11 patients (69%). Les patients comme l’équipe médicale ont vu des avantages certains à une telle organisation de services.

Conclusion Ce projet a permis de démontrer des avantages importants à un traitement en première ligne du VHC chez les patients suivis en TDO, tant en terme de bénéfices cliniques (acceptation, observance) que d’un point de vue d’organisation des soins pour les patients et l’équipe médicale.

Mots clés : Hépatite C ; Usage de drogues par injection ; Traitement de substitution de la dépendance aux opiacés ; Organisation des soins

It is estimated that approximately 275,000 Canadians are infected with the hepatitis C virus (HCV) (Public Health Agency of Canada). Injection drug users (IDUs) are most affected by this problem with a rate of sero-positivity of about 75% due to its transmission via contaminated injection materials1, 2. There are about 23,000 injection drug users in the province of Québec, among which two-thirds are in the Greater Montreal Region3. An inquiry conducted among IDUs in the Montreal Region revealed a rate of seropositivity for the HCV of 69%4. It is a worrisome fact that approximately 30% of these people were not aware that they were infected.

The standard treatment, which combines ribavirin and pegylated interferon, cures 50% to 85% of patients infected with the HCV5. In addition, among IDUs, the treatment seems to provide a good degree of protection against subsequent reinfection5. Although injection drug use is no longer among the exclusion criteria for treatment, the IDU population only rarely benefits from optimal treatment, most notably due to its duration, the high frequency of medical visits required and the side effects6. The fact that these treatments are primarily offered in a hospital setting is an additional obstacle for a population that is often reticent to make use of hospital services5, 6.

These facts reveal the necessity to adapt the treatment modalities for HCV to the particular needs of the IDU population. In this regard, studies tend to demonstrate the benefits of treating a HCV infection within the context of substitution treatment for opiate dependence (TOD). Treatment of hepatitis C will entail a very high rate of compliance with the treatment for opiate dependence, which requires regular appointments for the prescription of the substitute medication. The high rate of compliance with appointments also allows for early detection and treatment of the complications and adverse effects of hepatitis C treatment. In addition, the combination of the two treatments eliminates the need for patients to make additional trips and offers follow-up by professionals.
already known to the patients and with whom a trust relationship has been developed\textsuperscript{1, 5, 7-8}. Currently in Quebec, settings that offer this type of organization of care and services are rare.

This article presents an approach for treatment of an HCV infection administered within the context of substitution treatment in a family medicine unit located in St-Lambert (Family Medicine Unit of the Champlain-Charles-Lemoyne Family Physicians’ Group), a suburb near Montreal, Québec. The administrative region in which the clinic is located (Montérégie), is the region where the problem of injection drug use is the second greatest after the Montreal Region. This primary care setting is affiliated with a university hospital (Charles-Lemoyne Hospital) and with the University of Sherbrooke. The clinic has offered opiate dependence substitution treatment for more than 15 years. Out of the 23,000 patients registered with the clinic, 170 receive TOD. Six physicians prescribe substitution products. With two nurses and two human relations officers, they form a multidisciplinary team that is integrated into the general activities of the clinic.

Approximately two-thirds of the patients being followed for substitution treatment had the HCV at the onset of the project. Resistance and failures of previous treatments, primarily due to gaps in the level of compliance, were largely observed by the medical team. The proposed approach was integrated as a pilot project in the fall of 2007. The objective of the project was to assess the acceptability and feasibility of organized treatment of HCV cases among patients being followed in the substitution clinic. The project has been reviewed and accepted by the Ethics Committee of the CSSS Champlain-Charles-Lemoyne Research Centre.

**METHODS**

The design used for this study is a case series. Although the clinical efficiency parameters for treatment were measured and have been presented, the primary objective was to study the potential value of the treatment offer within a primary care setting offering substitution.

**PARTICIPATION AND RECRUITMENT PROCESS**

For reasons of feasibility, the medical team chose a first cohort of 23 patients who were invited to participate in the first treatment group. This choice was based on criteria that included the patient’s level of stability, compliance with substitution treatment as well as the presence of certain medical conditions (for example, hepatic cirrhosis, instable psychiatric disorders). It was planned that all eligible patients would be invited during the subsequent cohorts. This project however only presents the first two cohorts.

These patients were invited to a group meeting during which the medical team presented the project. Each patient who agreed to participate in the study first signed an informed consent form to participate in the research project. The patient then met with the project’s pivot nurse on two occasions. The first meeting consisted of education on HCV and the different aspects of the treatment. During the second meeting, the first interferon injection was administered under direct observation.

**DESCRIPTION OF THE INTERVENTION**

Before the start of the project, five physicians on the medical team of the family medicine unit visited the OASIS project in San Francisco\textsuperscript{9}, a clinic for TOD that offers treatment of the HCV to patients who frequent it. The clinic’s physicians and nurses also received various types of training in the treatment of the HCV and attended several symposiums and conferences. Lastly, links were established with specialized hospital services to serve as a safety net in case of complications and to allow for a corridor of services for pre-treatment consultations when required.

The HCV was managed in accordance with Canadian guidelines, which allowed for the identification of the absolute contraindications, and the frequency, duration and terms for follow-up\textsuperscript{10}. Treatment consisted of daily self-administration of a subcutaneous injection of pegylated interferon alfa-2a (Pegasys\textsuperscript{®}) as well as ribavirin taken orally.

All appointments for follow-up of the HCV treatment and for the substitution treatments were combined, therefore diminishing the number of trips that patients had to make. The same professionals (physicians, nurses and human relations officers) conducted the two medical follow-ups, with the exception of one physician who only provided the HCV treatment. At each of the appointments, the patients first saw the nurse who checked treatment compliance (self reported), the side effects and drug use. She also conducted the blood tests that are required as part of the HCV treatment. The nurse then relayed the information to the physician, who proceeded with a physical examination, the management of side effects and prescription of the substitution treatment. Meetings with the human relations officer were planned every 12 weeks. During these meetings, a systematic screening for depression was conducted using the Beck Test, which is frequently
used by the medical team as part of clinical care. More frequent appointments with the different practitioners could take place when the need was expressed by the patient, physician or nurse.

Lastly, the medical team met once or twice a month, discussed the more medically complex cases and exchanged on the pitfalls and facilitating conditions experienced with respect to the project (ex. solutions for the reimbursement problems with the medication).

VARIABLES AND SOURCES OF DATA

The acceptability and feasibility of the treatment being offered was measured from the perspective of the initial acceptance rate for the treatment (proportion of patients to whom the treatment was offered who accepted to start an anti-viral treatment), the rate of compliance with treatment (number of doses of the medication taken as expected) and satisfaction of the patients and medical team regarding the organization of the treatment. The virological response rates and presence of the treatment side effects were also measured. The majority of information was colligated in in-house collection tables (acceptance, compliance, side effects). Patient satisfaction was measured using self-administered questionnaires for each meeting and by a focus group. The monthly or bimonthly meetings of the medical team allowed for the documenting of facilitating factors, obstacles, as well as the team’s satisfaction with respect to the process. The presence of depressive symptoms was checked using the CES-D (Centre of Epidemiologic Depression Studies Depression Scale) questionnaire, a self administered depression screening questionnaire and with the Beck’s questionnaire, administered by the medical team every 12 weeks.

STATISTICAL ANALYSES

For the quantitative data, descriptive analyses (percentages, averages) were conducted to present the sociodemographic and health characteristics of the sample and to examine the effect of the project on the outcome variables. In terms of the qualitative material, different steps were taken to organize, reformulate and reconstruct the interview transcripts and notes in order to conduct an accurate analysis of the material. The qualitative material was submitted to a qualitative analysis of the content according to the rules of Thomas.

RESULTS

INITIAL ACCEPTANCE

The research project was conducted between the fall of 2007 and the spring of 2011. Twenty three patients were prioritized by the medical team to participate in the first two treatment cohorts. From these, 16 agreed to receive the treatment, which corresponds to an initial acceptance rate of 70%. The main reasons for refusal were fear of the side effects and a sense that there was no need for it. Two cohorts of eight patients successively began treatment 18 months apart. The sociodemographic characteristics of these patients, as well as some clinical information, are presented in table 1. All results are reported for all 16 patients who participated in the two cohorts.

COMPLIANCE WITH TREATMENT

Appointments were planned for weeks 0, 2, 4, 6, and 8, and then every four weeks until the end of treatment. Patients respected the planned appointments at the clinic at a rate of 96%. Compliance with treatment, that is, the number of doses taken as planned, was over 99%. Only a few doses were omitted, and this was due to administrative problems related to the reimbursement of medical treatments by the patients’ insurance.

VIROLOGICAL RESULTS

Table 2 presents the virological results obtained. Treatment was stopped for three patients due to a virological non-response (drop of viral load of < 2-log) in two cases and the presence of suicidal ideations in one case. These three patients were carriers of genotype 1. Two of these patients had already previously received HCV treatment, while the third had a co-infection of HIV/HCV. The sustained virological response could not be confirmed for two patients, since one of them did not come to his follow-up appointments and the other was still in the six-month post-treatment waiting period as of April 1, 2011.

HEMATOLOGICAL COMPLICATIONS

The hematological complications were similar to those usually expected with interferon and ribavirin, as shown in Table 3. Moreover, antidepressants had to be prescribed for three patients. However, no clinically
significant increase in the doses of the substitution products was required.

SATISFACTION

The satisfaction questionnaires, as well as the focus group, enabled us to see the sustained high levels of satisfaction throughout the project. The main positive aspects that were identified by the patients related to the benefits of being offered treatment in the same clinic as the substitution treatment. First and foremost, the patients appreciated receiving follow-up treatment for their HCV from a team that was known to them and felt that the team did not judge them for their addiction problem. In addition, the fact that the appointments were coordinated and that a second trip was not required was a significant advantage that was expressed. The care being provided in a primary care setting and not in a hospital was also a positive factor that was identified. In addition, more than half of the patients in the focus group said that they would not have accepted receiving the treatment in a specialized medical clinic (e.g.: gastroenterology). Lastly, the group meetings were also appreciated by the participants.

DISCUSSION

The treatment approach to hepatitis C proposed by this project demonstrated the feasibility, as well as several benefits, to HCV treatment of patients receiving substitution treatment. Although the use of this healthcare strategy has been demonstrated in other countries (particularly in the United States), this project is innovative in its application in Quebec where there is a publicly funded health system and medication program. First, the exceptional rates of compliance (99%) as well as the high level of treatment completion (8%) are elements that demonstrate the benefits of this organization of care. In essence, the effectiveness of HCV treatment is dependent on the percentage of doses received as recommended. The results obtained are consistent with those of a meta-analysis that studied the different treatment parameters of HCV among IDUs, data that emanated from various organizational models of care. This study demonstrated an average rate of completion of 71% and an average rate of compliance of 92%. Although the cohort of patients studied in our project was limited, the rates observed regarding these aspects of treatment are promising. In addition, the rate of sustained virological response observed among our patients was higher (69%) than those obtained with the same therapeutic regimen among the IDU populations (average of 54.3%) although once again, the size of our population limits the statistical significance of our results.

In our study, 70% of patients to whom treatment was offered agreed to receive it. In addition, a study conducted with IDUs in the Montreal Region had demonstrated that the initial treatment acceptance rate is positively influenced if patients receive substitution treatment, which could explain our results. As well, it is interesting to note that half of the participants who participated in the focus group said that they would not have followed treatment in a hospital setting, which seems to be an argument in favour of treatment in a primary care setting in the same substitution clinic.

Comments received from patients who benefited from the treatment in the substitution clinic demonstrate the great satisfaction of the clientele with respect to this approach. The injection drug use population is one that is vulnerable, and the traditional hospital approach may have certain limits with this population given the resistance, both on the part of the patients as well as certain health professionals. This non-judgmental aspect of the medical team is an element that clearly came out of the consultations with patients who participated in the study. In addition, having an already well-established therapeutic relationship with the professionals on the team was also identified as an undeniable benefit of the proposed approach. Lastly, the logistical benefits linked to the combination of the two medical treatments were identified by the study’s participants. All of these aspects certainly had a positive influence on initial acceptance, compliance with treatment and keeping of appointments.

The professionals on the medical team saw significant benefits to the approach recommended in this project. They appreciated having a more global management of their patient’s state of health. From an organizational point of view, the project also demonstrated the feasibility of a HCV treatment in a primary care setting by family physicians, an uncommon practice in the province of Quebec. Facilitating conditions such as proper training and the presence of a pivot nurse were also identified. The interdisciplinary approach was also successful as it allowed a better distribution of tasks on the basis of each individual’s expertise and promoted collaboration among the different professionals. Lastly, we note that the close ties and service corridors created with specialized services and resource people were appreciated by the treatment team.

BIASES AND LIMITATIONS

The first limitation of the study is the small number of patients that it includes, i.e., 16 patients. Moreover, patients were selected on a non-random basis according to the physicians’ judgment as to which patients
should be receiving treatment as a priority. This way of working obviously could introduce a selection bias by preferring patients who will react more favourably to the treatment. However, this project particularly aimed at evaluating the feasibility of this procedure in a real-life contact, which is why patients were not selected based on sample variability.

The self-reported data also posed certain challenges with regard to the interpretation of results. It is possible that patients reported higher levels of compliance and satisfaction than was actually the case. This bias may have been particularly present during the focus group since one of the treating physicians was present. Indeed, since one of the treating physicians was also one of the primary investigators, his presence seemed essential to us for this focus group. However, we are aware that this presence could introduce a bias of social desirability. Nonetheless, we believe that the trust relationships established with the patients limited the impact of this bias.

**CONCLUSION**

Injection drug users represent a vulnerable population, and the risks associated with drug use are numerous. A hepatitis C virus infection undoubtedly represents one of the most significant consequences for this population. Fortunately, medical advances in the past few decades are such that this infection can now be cured in a majority of cases. Nonetheless, although injection drug users make up the large majority of the population affected by the infection today, the proportion that receives treatment remains low, most notably due to the fact that services are not well adapted to these people. Through our project, we demonstrated that the treatment of the HCV in a primary care setting, in a substitution clinic, is not only feasible, but our results allow us to assume that there are many benefits both with respect to the clinical effectiveness of the approach as well as patient satisfaction, although the results must be interpreted based on the methodological limitations of the project. Therefore, it would seem desirable that this model inspire other primary care settings that work with injection drug users to offer HCV treatment. By combining these innovative approaches to the treatment models of specialized services, there is every reason to believe that we would be able to better manage this infection and decrease the significant burden.

**ETHICAL CONSIDERATIONS**

The research project received funding from Hoffman-La Roche. This grant allowed for training of the professionals, research support staff, and activities for the dissemination of knowledge. No free medication was given to patients and the treating team had no obligation to prescribe a specific commercial product. In addition, the comparison of the therapeutic effectiveness of the different treatment molecules was not a variable being studied in any of the cases and details concerning the medication prescribed are not included in the research results. Lastly, the researchers did not receive any remuneration from this grant.

**ACKNOWLEDGMENTS**

We would like to thank the entire medical team that contributed to this project, as well as the patients who agreed to participate. We also thank Hoffman-La Roche for the research grant that made this project possible.

**REFERENCES**


5. Mehta SH, Thomas DL, Sulkovsky MS, Safaein M, Vlahov D, Stratthdee SA. A framework for understanding factors that affect access and utilization


<table>
<thead>
<tr>
<th>TABLE 1</th>
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<tbody>
<tr>
<td>DESCRIPTION OF PATIENTS (N = 16)</td>
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<table>
<thead>
<tr>
<th>Average age (years)</th>
<th>43.8</th>
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<tbody>
<tr>
<td>Sex (number)</td>
<td>Men 15 (93%)</td>
</tr>
<tr>
<td></td>
<td>Women 1 (6%)</td>
</tr>
<tr>
<td>Job</td>
<td>7 (44%)</td>
</tr>
<tr>
<td>Average duration of follow-up in the treatment substitution clinic (months)</td>
<td>66 (min. 9, max. 145)</td>
</tr>
<tr>
<td>Genotype</td>
<td>1a 7 (44%)</td>
</tr>
<tr>
<td></td>
<td>1b 5 (31%)</td>
</tr>
<tr>
<td></td>
<td>2a 1 (6%)</td>
</tr>
<tr>
<td></td>
<td>3a 3 (19%)</td>
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<table>
<thead>
<tr>
<th>TABLE 2</th>
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<tbody>
<tr>
<td>VIROLOGICAL RESULTS (N=16)</td>
</tr>
</tbody>
</table>

| Treatment completed | Yes | 13 (81%) |
| No | 3 stopped (18%) |
| Fast virological response (n=16) | 3 (19%) |
| Response at the end of treatment (n=15) | 13 (81%) |
| Sustained virological response (n=15) | 11 (69%) |

<table>
<thead>
<tr>
<th>TABLE 3</th>
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<tbody>
<tr>
<td>HEMATOLOGICAL COMPLICATIONS (N=16)</td>
</tr>
</tbody>
</table>

| Drop in Hemoglobin < 110 | 8 (50%) |
| Erythropoietin (Eprex) prescribed | 7 (44%) |
| Drop in neutrophils < 0.6 | 6 (38%) |
| Filgrastim (Neupogen) prescribed | 6 (38%) |
Understanding Cognitive Behavioural Therapy for Addiction: Its Use in Tapering Off Benzodiazepines

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1Addiction Centre, 6th Floor, North Tower, Foothills Medical Centre, 2C203, Foothills Medical Centre, 3Addiction Centre, Foothills Medical Centre

Cognitive Behavioural Therapy (CBT) is an empirically supported psychotherapy involving a combination of verbal interventions and behaviour modification techniques aimed at helping patients to identify habitual thinking errors and behaviours, to enable change. The approach is collaborative, active, and structured based on principles from learning theory. CBT alone, or in combination with pharmacotherapy, has been found to be effective for a diverse number of psychiatric disorders, but especially for the treatment of depressive and anxiety disorders. Anxiety is typical in the benzodiazepine dependent patient, where knowing how to manage behaviours and cognitions preventing dose reduction or abstinence are essential to ensuring successful addiction treatment outcomes. In addition, CBT interventions represent the core of relapse prevention techniques for the treatment for addiction, making working knowledge of CBT essential to any practitioner who treats patients with addiction as relapse to prior addictive behaviour is an all too common outcome after addiction treatment.

The most common causes for relapse include experiencing and not knowing how to manage negative emotional states (e.g.: anxiety) without using a substance as well as exposure to substance using people, but cravings, unbalanced lifestyles, social pressures to use, other cues for use, and a lack of sober supports are all potential contributors. Rather than being viewed as a treatment failure, slips and relapses may be better viewed as potential learning opportunities for patients to develop new ways for preventing relapse or minimizing slips from turning into full blown relapses. Using the example of managing the patient with benzodiazepine dependence during a taper, practical concepts for the addiction practitioner will be highlighted to aid the incorporation of CBT techniques into daily practice.

BEHAVIOURAL INTERVENTIONS

The behavioural interventions in CBT for addiction initially focus on ways of avoiding exposure to known triggers for use. In addition to switching short-acting benzodiazepines to longer-acting agents to limit rebound/withdrawal anxiety, limiting access by removing left over stores of medications, limiting prescription amounts, structuring use of benzodiazepines to specific times (no “prn” use), and having one physician prescribe are potential strategies. Refusal skills are also easily practiced in case of exposure to persons known to the patient who use, and failing that developing a plan to leave high risk situations or contact a sober support. The goal is to interrupt a behavioural intention to use by breaking, delaying, avoiding and replacing addictive behaviours. Behaviours such as learning to focus on regular (but not excessively deep) breathing in anxious situations, practicing relaxation, and physical activity can be not only acutely beneficial, but also able to be applied in other areas of their everyday life. Patients often become successful in developing new behavioural habits that counteract their old addictive behaviours. However these newly developed behaviours alone are frequently insufficient to maintain longer term abstinence. One of the most challenging factors in stopping substance use and most importantly maintaining abstinence is a system of thoughts and broader beliefs that a patient holds around his or her use. Hence, the cognitive strategies often become increasingly the more salient component of the CBT for addiction as a person progresses in their recovery.

COGNITIVE INTERVENTIONS

Cognitive interventions for addictions primarily focus on identifying and changing patient’s thoughts and beliefs about their addictive behaviours that are: a) erroneous or maladaptive, b) cause emotional distress, c) permit or facilitate substance use, and/or d) maintain their use patterns. The cognitive interventions aim to not simply contradict erroneous or maladaptive thoughts, but to base cognitive interpretations of events on factual or...
experiential evidence. Patients with anxiety and those with benzodiazepine dependence often misidentify symptoms of withdrawal as anxiety or misidentify anxiety as an underlying physical illness of concern. Identifying the basis of withdrawal/anxiety symptoms can help de-catastrophize the experience of anxiety, preventing the patient from having anxiety about anxiety. Monitoring of symptoms and recording situational variables helps to identify triggers and demonstrate the time-limited nature of anxiety. Anticipatory anxiety can be addressed by initially rating the degree of anxiety with a particular situation, discussing realistic ways to approach the situation, then re-rating the anxiety after. Patients should be prepared to experience anxiety as a normal and expected phenomena when coming off any type of sedative agent, but that in time (often 6-12 months), it will gradually decrease, but likely remain in some regard albeit manageable.

HOW TO ADD CBT DURING A TAPER

The best evidence suggests that a benzodiazepine taper should be slow over weeks, if not months. A typical taper schedule is fixed in nature involving a reduction of total dosage by about 10% per week, expecting that the last 25% of the taper will be the most difficult. In addition to considering adding on a selective serotonin reuptake inhibitor (to help manage anxiety over the longer term) or an anticonvulsant medication (to reduce symptoms of withdrawal) in the last 25% of the taper, there is good evidence that a taper combined with the use of CBT improves outcome, specifically the cognitive interventions helping the patient increase his or her self-efficacy during the taper and post-taper. Some of the factors that typically permit and maintain drug use are: one’s perceived need to self-medicate symptoms of anxiety and one’s belief that withdrawing from the drug will inevitably create intolerable effects of anxiety, depression, and associated physiological sensations. The cognitive interventions can be very useful in targeting these beliefs and helping a patient to shift his or her assumptions about their own capacity to cope.

The specifics of CBT interventions are, however, often only described minimally. From our own experience at the Addiction Centre at the Foothills Medical Centre in Calgary, we have appended twelve useful guidelines for a successful application of the cognitive interventions in a benzodiazepine taper followed by specific examples of “what to say” to patients in Table 1. Hopefully, this could provide a focus to the content to be discussed with patients initiating a benzodiazepine taper. An additional reference can be found in the paper by Ahmed et al where the authors offer a “Self-Help Handout” for patients to get ready for the taper, outlining the specifics of a reasonable taper, specific worries patients may have and how to counteract them.

In summary, CBT is an evidence-based practice for the treatment of patients with both substance use and many psychiatric disorders. Components can be readily incorporated by addiction practitioners to help their patients during a benzodiazepine taper to improve the likelihood of taper completion and maintaining abstinence thereafter. We look forward to your feedback on the Guidelines and Examples. Please address your comments to: Dr. Kasia Galperyn PhD kasia.galperyn@albertahealthservices.ca

### TABLE I: THE ADDICTION CENTRE’S TWELVE COGNITIVE BEHAVIOUR THERAPY (CBT) GUIDELINES DURING BENZODIAZEPINE (BZ) DISCONTINUATION

<table>
<thead>
<tr>
<th>Guidelines</th>
<th>Examples</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Introduce CBT to patient before the taper begins</td>
<td>› This will strengthen my coping with anxiety or withdrawal symptoms</td>
</tr>
<tr>
<td></td>
<td>› This will build on my personal resources</td>
</tr>
<tr>
<td></td>
<td>› This will reduce my general vulnerability to anxiety</td>
</tr>
<tr>
<td>2. Start with gradual taper with no PRN BZ use so success of taper is attributed to themselves &amp; CBT</td>
<td>› When I use CBT strategies, they become a part of me</td>
</tr>
<tr>
<td></td>
<td>› I make the taper successful, not the meds</td>
</tr>
<tr>
<td>3. Reframe excessive catastrophic worries about the taper such as “I won’t cope”, “It will be a nightmare”</td>
<td>› I will learn strategies helpful in coping with the taper</td>
</tr>
<tr>
<td></td>
<td>› I will be able to cope if I use the strategies</td>
</tr>
<tr>
<td></td>
<td>› I don’t have to control the symptoms at all costs, I just need to cope</td>
</tr>
<tr>
<td>4. Normalize the withdrawal effects</td>
<td>› Withdrawal effects are just like anxiety; they can be tolerated if I taper gradually</td>
</tr>
<tr>
<td></td>
<td>› The anxiety will get worse at the beginning but it is normal</td>
</tr>
<tr>
<td></td>
<td>› The symptoms will slowly diminish with time</td>
</tr>
<tr>
<td>5. Practice behavioural awareness &amp; familiarity with symptoms to reduce emotional reactivity/vulnerability</td>
<td>› It’s ok to feel physical sensations in my body</td>
</tr>
<tr>
<td></td>
<td>› I can identify specific symptoms associated with tapering</td>
</tr>
<tr>
<td></td>
<td>› If I practice awareness, I will become more tolerant, better prepared &amp; accepting of the taper</td>
</tr>
</tbody>
</table>
6. Reframe the harsh or negative thoughts (e.g. “I want to get rid of all the symptoms”)  
› I can accept the taper as temporary  
› I don’t have to get rid of all the symptoms, I can live with some anxiety  
› I am able to cope and experience some anxiety

7. Focus on self-efficacy in self talk to increase confidence  
› I am able to ride out the anxiety symptoms like a wave  
› I can watch the anxiety and let it pass, not attach myself to it

8. Focus on the general capacity to tolerate discomfort  
› I have space to tolerate uncomfortable sensations  
› I have capacity to cope with anxiety

9. Focus on general attitude  
› Even though I cannot fully control the physical sensations of the taper, I can change the way I think about them  
› I can control how I cope with the symptoms

10. Prepare for “life without BZs” as a new core belief for patient  
› I know & will use strategies to cope with any future anxiety  
› I am able to function without BZs  
› I am not a BZ user

11. Overcome thoughts that potentially sabotage abstinence by thinking ahead what may lead to relapse  
› My future decisions are consistent with being a “non-BZ user”

12. Identify CBT as a complementary tool in long-term recovery  
› I can change my way of thinking, CBT is a part of my new thinking

REFERENCES


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