Adherence to prescription guidelines for medical cannabis in disability claimants

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Abstract

Objective To examine a case series of 70 disability claimants who were referred to a clinic for multidisciplinary medical evaluation for physician compliance with cannabis prescription guidelines for pre-existing cannabis prescriptions.

Design Retrospective case series analysis.

Setting A private clinic in New Brunswick specializing in multidisciplinary medical assessment for institutional third-party insurers.

Participants All referrals for independent review of cannabis prescriptions between May 2016 and February 2018 (N = 70).

Main outcome measures Compliance with the cannabis prescription guidelines.

Results Treating physicians were found to have not adhered to the guidelines in 53 of 61 patients (86.9%) who were prescribed cannabis products for pain management and in 8 of 9 patients (88.9%) who were prescribed cannabis products for treatment of posttraumatic stress disorder. Clinical assessment and radiologic review failed to identify a neuropathic cause of pain in 70.5% of pain cases. Adequate trials of noncannabinoid medications had not been attempted for 72.1% of patients with pain nor for any of the patients with posttraumatic stress disorder. Contraindications to cannabis were identified in 65.7% of cases, including evidence suggesting a past or present cannabis use disorder or currently active substance use disorder in 34.3% of cases. The prescriptions were found to be consistent with prescription guidelines in just 12.9% of cases.

Conclusion Very few of the reviewed cannabis prescriptions were found to be consistent with cannabis prescription guidelines. Respectful attention to guidelines might avoid unwarranted overprescribing, limit the secondary increase in comorbidity, and facilitate future scientific study and evaluation of medical cannabis.

Editor's key points

- Cannabis prescription guidelines have been developed to help physicians navigate the appropriateness of these new treatments. This study aimed to assess compliance with these guidelines for pre-existing cannabis prescriptions for pain and posttraumatic stress disorder.
- Among the 70 cases assessed, applying prescription guidelines resulted in a recommendation favouring cannabinoid authorization in only 8 of 61 patients with pain and 1 of 9 patients with posttraumatic stress disorder. Sixty-seven of the 70 cases had at least 1 clinical feature that merited caution in authorizing cannabis.
- Adequate trials of noncannabinoid medications were attempted in only a quarter of patients, neuropathic causes of pain could not be identified for most patients with pain, and contraindications were present for about two-thirds of patients.
- There was concern about substance use disorder in more than a third of patients: 11 had documented findings suggesting the possibility of current or past cannabis use disorder; there was a high index of suspicion for 20 patients concerning their likelihood of currently active substance use disorder involving alcohol or other drugs besides cannabis; and 7 patients fell into both these categories.

Points de repère du rédacteur

- Des lignes directrices sur la prescription de cannabis ont été élaborées pour aider les médecins à mieux comprendre la pertinence de ces nouveaux traitements. Cette étude a pour but d'évaluer la conformité avec ces lignes directrices dans le cas de prescriptions antérieures de cannabis pour la douleur et le trouble du stress post-traumatique.
- Parmi les 70 dossiers évalués, la mise en application des lignes directrices sur la prescription s'est traduite par une recommandation en faveur de son autorisation dans seulement 8 cas de patients sur 61 pour la douleur, et 1 cas de patient sur 9 pour un trouble de stress post-traumatique. Dans 67 cas sur 70, au moins une caractéristique clinique justifiait d'exercer de la prudence dans l'autorisation du cannabis.
- Des essais suffisants de médicaments sans cannabinoïdes ont été tentés chez seulement le quart des patients, les causes neuropathiques de la douleur ne pouvaient pas être cernées chez la plupart des patients souffrant de douleur, et des contre-indications étaient présentes chez environ les 2 tiers des patients.
- Il y avait des préoccupations relatives aux troubles liés à la consommation de substances chez plus du tiers des patients : dans le cas de 11 d'entre eux, des constatations documentées faisaient valoir la possibilité de troubles actuels ou antérieurs de consommation de cannabis; il y avait un fort degré de suspicion à propos de la probabilité que 20 des patients aient des troubles actifs liés à la consommation d'alcool et d'autres drogues en plus du cannabis; et 7 patients se classaient dans ces 2 catégories.

Conformité avec les lignes directrices sur la prescription de cannabis médical à des requérants de prestations d'invalidité

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Résumé

Objectif Examiner une série de 70 dossiers de demandes de prestations d'invalidité, qui ont été envoyés à une clinique d'évaluation médicale multidisciplinaire pour déterminer le respect par les médecins des lignes directrices sur la prescription de cannabis lorsqu'ils en avaient prescrit antérieurement.

Type d'étude Analyse rétrospective d'une série de cas.

Contexte Une clinique privée au Nouveau-Brunswick qui se spécialise dans l'évaluation médicale multidisciplinaire pour le compte de compagnies d'assurance au service de tiers institutionnels.

Participants Tous les dossiers transmis à des fins d'évaluation indépendante des prescriptions de cannabis entre mai 2016 et février 2018 (N = 70).

Principaux paramètres à l'étude La conformité avec les lignes directrices sur la prescription de cannabis.

Résultats Il a été démontré que les médecins traitants ne s'étaient pas conformés aux lignes directrices dans le cas de 53 patients sur 61 (86,9 %) à qui ils avaient prescrit des produits du cannabis pour le contrôle de la douleur, et dans le cas de 8 des 9 patients (88,9 %) ayant reçu une prescription de produits du cannabis pour le traitement d'un trouble de stress post-traumatique. L'évaluation clinique et les examens radiologiques n'ont pas réussi à identifier une cause neuropathique de la douleur dans 70,5 % des cas de douleur. Des essais suffisants de médicaments sans cannabinoïdes n'avaient pas été tentés chez 72,1 % des patients pour la douleur ni pour aucun des patients souffrant d'un trouble de stress post-traumatique. Des contre-indications à l'usage de cannabis ont été cernées dans 65,7 % des cas, notamment des éléments de preuve d'un trouble antérieur ou actuel de consommation de cannabis, ou d'un trouble actif de consommation de substances dans 34,3 % des cas. Les prescriptions se conformaient aux lignes directrices applicables dans seulement 12,9 % des cas.

Conclusion Les prescriptions examinées étaient très peu nombreuses à se conformer aux lignes directrices sur la prescription de cannabis. Une attention rigoureuse à la conformité avec les lignes directrices pourrait éviter une prescription excessive injustifiée, limiter une augmentation secondaire de la comorbidité, et faciliter les futures études scientifiques et l'évaluation du cannabis médical.

As policy makers attempt to address the implications of recreational cannabis legalization,[1] agencies involved in the medical management of patients with cannabis prescriptions are adapting to changing demands.[2] In this time of transition, we have served as providers of independent medical evaluations of disability claimants who had pre-existing authorization to use cannabinoids from physicians who prescribed medical cannabis products. The recent publication in *Canadian Family Physician* of simplified guidelines for prescribing medical cannabinoids in primary care[3] prompted us to recount the uptake of the existing guidelines by the practitioners whose patients we have seen. The guidelines are largely the same as the preliminary guidance[4] provided by the College of Family Physicians of Canada in 2014, which has been very useful when judging the merits of cannabis in each case. This paper summarizes our experience and provides a glimpse into the rather inconsistent management of cannabis prescriptions that we have witnessed in recent years.

Methods

All ethical and legal guidelines and requirements necessary for retrospective analysis and reporting of de-identified clinical data in New Brunswick were followed. Patients were referred to a private clinic that specializes in multidisciplinary medical assessment under the direction of an occupational medicine specialist serving institutional third-party insurers. During the study period most of our clients' disability claimants receiving cannabis prescriptions were referred to us for standard prescription review. The claimants were seeking coverage for medical cannabis products that had been prescribed by their treating physicians for pain management or for posttraumatic stress disorder (PTSD). All referrals underwent forensic review of medical documentation to clarify the diagnoses and potential liability for work injuries. All patients were examined either by an orthopedic surgeon, a physical medicine specialist, or a psychiatrist. Patients also completed a battery of psychometrically validated scales, after which they were offered a chance to verify the accuracy of what they had reported about their substance use by providing a urine sample for testing. A radiologist reviewed all diagnostic imaging in the files. Adherence to the preliminary cannabis prescription guidelines[4] was assessed by a multidisciplinary team of physicians who reviewed the evidence in each case, and their opinions were re-examined following publication of the updated guidelines.[3] Descriptive statistics were processed using an Excel spreadsheet.

Results

All referrals for independent review of cannabis prescriptions between May 2016 and February 2018 were included in this case series. The patients with pain included 45 men and 16 women aged 30 to 72 years (mean [SD] 51 [9.4] years, median 53 years). Timing of the assessments was 381 to 13 979 days (ie, approximately 1 to 38 years) after the dates of the original work injuries (mean [SD] 3707 [3507.1] days, median 2044 days). Patients with PTSD included 9 men and women aged 35 to 54 years (mean [SD] 44 [6.7] years, median 46 years). Assessments were completed 215 to 3487 days (ie, less than 1 to more than 9 years) after the dates of their traumatic work incidents (mean [SD] 1583 [1072.0] days, median 1479 days). Three people who had PTSD as well as orthopedic pain complaints are reported as pain cases because their prescriptions were authorized for pain management and not PTSD. The frequencies of clinical features that are incompatible with the cannabis prescription guidelines are summarized in **Table 1**.

Pain was not neuropathic in 70.5% of cases

For pain patients, the guidelines recommend consideration of cannabis products for management of refractory neuropathic, cancer, or palliative pain, but not for pain associated with headache, fibromyalgia, osteoarthritis, rheumatoid arthritis, or back pain. Detailed clinical assessment and radiologic evidence failed to identify a neuropathic pain source in 43 of 61 patients.

Adequate trials of noncannabinoids did not take place for 75.7% of patients

For pain patients, the guidelines recommend 6-week trials of at least 3 prescribed analgesics (eg, gabapentinoids, tricyclic or selective serotonin reuptake inhibitor antidepressants) before adding pharmaceutical cannabinoids or opioids. They further recommend considering nonpharmaceutical herbal cannabis products only when pain remains refractory despite titration to optimal levels of each drug. Review of pharmacy records and physician notes revealed that the World Health Organization analgesic ladder[5] was not followed in 44 of the 61 pain cases. Similarly, current recommendations for pharmacotherapy for PTSD[6] identify various first-, second-, and third-line agents, but adequate trials were not attempted in any of the 9 cases.

Contraindications were present in 65.7% of cases

In total, 46 of the 70 cases had at least 1 contraindication against medical cannabis treatment. Cardiovascular or respiratory disease (or both) was found in 30 cases, and while some of the potential harm might be mitigated by the use of non-smoked products, the prescriptions typically did not specify the route of administration or the content of active cannabinoids such as tetrahydrocannabinol (THC) or cannabidiol in the formulation. Sixty-seven of the 70 cases had at least 1 clinical feature that merited caution in authorizing cannabis.

Table 1. Prescription guideline adherence in 70 referrals for independent medical examinations pertaining to previous authorizations for medical cannabis products

CLINICAL FEATURES	PATIENTS WITH PAIN, N (%), N = 61	PATIENTS WITH PTSD, N (%), N = 9
Indications not met		
• Pain generator is not neuropathic	43 (70.5)	NA
• Conventional pharmacotherapies not maximized	44 (72.1)	9 (100.0)
• Synthetic cannabinoid not tried before herbal cannabis	48 (78.7)	8 (88.9)
Contraindications		
• < 25 y of age	0 (0.0)	0 (0.0)
• Personal history or strong family history of psychosis	1 (1.6)	0 (0.0)
• Signs of current or past cannabis use disorder	11 (18.0)	0 (0.0)
• Currently active substance use disorder	18 (29.5)	2 (22.2)
• Cardiovascular disease	13 (21.3)	1 (11.1)
• Respiratory disease	26 (42.6)	0 (0.0)
• Pregnant, planning pregnancy, or breastfeeding	0 (0.0)	0 (0.0)
• Total cases with at least 1 contraindication	43 (70.5)	3 (33.3)
Cautions		
• Active mood or anxiety disorder	41 (67.2)	8 (88.9)
• Smokes tobacco	32 (52.5)	3 (33.3)
• Risk factors for cardiovascular disease	34 (55.7)	5 (55.6)
• Heavy user of alcohol or has a sedating prescription	31 (50.8)	1 (11.1)
• Total cases with at least 1 caution	58 (95.1)	9 (100.0)

NA—not applicable, PTSD—posttraumatic stress disorder.

Findings were suggestive of substance use disorder in 34.3% of patients

Eleven patients had documented findings that suggested the possibility of current or past cannabis use disorder. The findings included unusually high doses (eg, 12 g/d), amounts increasing over time, attempts to procure more cannabis than prescribed, and obtaining cannabis from illegal sources, and all of these cases reported chronic recreational cannabis use before their work injury. Three of 11 had positive urine test results for nonprescribed opioids or cocaine, 3 did not consent to testing, and 5 had negative findings for 9 commonly abused drugs other than THC. Seven of these 11 were among the 20 patients (28.6%) for whom there was a high index of suspicion concerning their likelihood of currently active substance use disorder involving alcohol or other drugs besides cannabis. Clinical signs included frequent drinking despite a history of alcohol addiction treatment, opioid drug-seeking from emergency departments, conviction for a drug offense, admission of polysubstance abuse, and positive urine test results in 6 of 20 cases. Seven of the 20 patients reported frequent binge drinking, with AUDIT (Alcohol Use Disorders Identification Test) scores ranging from 8 to 14 points (scores of 8 or more indicate hazardous or harmful alcohol use).[7]

Only 12.9% of cases met the guidelines

Applying the prescription guidelines resulted in a recommendation favouring cannabinoid authorization in 8 of 61 patients with pain and 1 of 9 patients with PTSD. Treating physicians had not conformed to the prescription guidelines in 87.1% of cases.

Discussion

There is a general perception that medical cannabis might have less potential for harm compared with some alternative pharmaceutical treatments,[8] but potential risks that present in individual patients cannot be ignored. The medical principles of ensuring an accurate medical diagnosis and properly reviewing contraindications must be respected in order to avoid inadvertently contributing to physical and mental comorbidity. Respectful attention to guidelines might avoid unwarranted overprescribing, limit the secondary increase in comorbidity, and facilitate future scientific study and evaluation of medical cannabis. For medical cannabis to be an effective therapeutic class, the industry must focus on standardizing the dosages of THC and cannabidiol, and on improving the formulations to make their pharmacokinetics more predictable. Medical prescribers must evaluate all the risks the product might pose for patients, including potential effects on function and daily activities.

Limitations

This case series involved a relatively small number of cases, particularly for PTSD, all from a single private clinic evaluating disability claimants for third-party insurers. Data on substance use relied on self-report, and urine testing was voluntary. It is possible our data underestimate the frequency of substance misuse in this cohort. While our results might not be generalizable, they certainly suggest there is room for improvement in the management of cannabis prescriptions.

Conclusion

Very few of the reviewed cannabis prescriptions were found to be consistent with cannabis prescription

guidelines. If medical cannabis is to evolve as a treatment option, increased personal recreational use cannot overtake medical and scientific principles and squander the potential of this new therapeutic class.

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Contributors

Drs Elias, MacLaren, and **Metcalfe** conceived and designed the research. **Drs Elias, MacLaren,** and **Hill-Elias** collected the data. **Drs MacLaren** and **Metcalfe** interpreted the data. **Drs MacLaren** and **Hill-Elias** drafted the manuscript. **Drs Elias, MacLaren,** and **Metcalfe** provided critical revisions. All authors approved the version submitted for publication.

Competing interests

Dr Elias is Chief Executive Officer and Chief Medical Officer of Canadian Health Solutions Inc and provides assessment of the effects of prescribing, including of cannabis, to institutional insurers in Canada. The other authors are all employed by Canadian Health Solutions Inc.

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