Supportive Care in Cancer
https://doi.org/10.1007/s00520-020-05403-2

COMMENTARY

Medical cannabis in supportive cancer care: lessons from Canada

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Received: 12 February 2020 / Accepted: 4 March 2020

Abstract
Medical cannabis, or cannabinoid-based products, continues to grow in popularity globally, driving the evolution of regulatory access frameworks; cancer patients and caregivers often rely on guidance from their physicians regarding cannabinoid-based treatments. But the majority of healthcare practitioners still feel unprepared and insufficiently informed to make reasonable, evidence-based recommendations about medical cannabis. More than 30 countries worldwide have now legalized access to medical cannabis; yet various nations still face arduous regulatory challenges to fulfill the needs of patients, healthcare practitioners, and other medical stakeholders. This has affected the deployment of comprehensive medical cannabis access programs adapted to cultural and social realities. With a 20-year history of legal medical cannabis access and nearly 400,000 registered patients under its federal access program, Canada serves as a model for countries which are developing their regulatory frameworks. The Canadian clinical experience in cannabinoid-based treatments is also a valuable source of lessons for healthcare professionals who wish to better understand the current evidence examining medical cannabis for oncology patients.

Keywords Medical cannabis · Canadian experience · Supportive cancer care

Introduction

Access to cannabinoid-based products is a common request by patients and caregivers in oncology and palliative care clinics worldwide [1]. However, its integration in most clinical settings has been hindered by lingering stigma, poor academic training, significant research gaps, limited or conflicting regulations, and unworkable practice guidelines produced by reluctant medical regulatory authorities.

Interest in medical cannabis among healthcare professionals has been climbing steadily, especially since the understanding of the endocannabinoid system and its involvement in homeostatic regulation [2]. In addition, cannabinoid-based products have become more accessible, including different delivery methods and new formulations of cannabinoids. This reality of certain jurisdictions led to a growing evidence of therapeutic potential of these cannabinoid-based products in several clinical settings including oncology [3, 4].

Despite the increasing interest from healthcare professionals, many of them still report feeling ill-prepared to discuss cannabinoid-based products with their patients [5]. A recent survey of oncologists in the USA revealed that only 30% felt sufficiently informed to make recommendations regarding medical cannabis in general [6]. Similarly, a cross-sectional survey of Australian general practitioners showed that 61.5% had received at least one patient inquiry regarding cannabinoid-based treatments but only 10% considered themselves having sufficient knowledge of this class of medication [7].

More than 30 countries worldwide have now legalized access to medical cannabis [8, 9]. Other countries have limited access to specific cannabinoid-based products. Many of these jurisdictions are now trying to adapt their programs in response to patient-accessibility needs, healthcare professional challenges, other stakeholder feedback, and both cultural and social realities.

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Published online: 14 March 2020

The Canadian experience

Canada has a long history of medical cannabis access, with a robust and evolving federal program first enacted in 2001 as a government response to a constitutional challenge by Terrance Parker, a patient diagnosed with epilepsy, who was charged with cannabis possession [10]. The current system of medical cannabis access in Canada is defined within the Cannabis Act, an Act to legalize and restrict access to cannabis products [11, 12]. The Act regulates the production, sale, and distribution of products, including cannabis extracts for both ingestion and inhalation, capsules, topicals, concentrates, and fresh or dried cannabis flowers [13]. Under strict regulation by Health Canada, products must adhere to quality assurance and packaging and labeling standards and must be labeled with THC and CBD concentrations. The medical cannabis access regulations also permit patients or designated persons to produce small amounts of cannabis for personal medical use with the appropriate authorization.

Medical Cannabis in Canada—benefits and burdens

Despite these regulatory controls, medical cannabis is not an approved treatment or prescription drug in Canada and is not available in pharmacies or on public insurance formularies. Medical access is controlled via a specific authorization, defined as "Medical Document" completed by a physician or qualified nurse practitioner. The completed Medical Document is submitted directly to a Licensed Producer (LP); thereafter, the authorized patient may order products through the LP's web-based portal to be shipped directly to the patient's residence [14]. Institutions such as hospitals and long-term care facilities may also order products directly from LPs.

This system of medical cannabis access has facilitated nearly 400,000 current patients suffering from various medical conditions to gain access to medical cannabis in Canada. Legalization of non-medical cannabis has increased patient interest and access to regulated products; however, gaps in medical education remain significant. Furthermore, the complexity of the regulatory system has resulted in only 10% of physicians completing a medical authorization [15]. Unsupervised use of cannabis, both legal and illicit, is still common among cancer patients.

Ongoing questions about safety and effectiveness of cannabinoid-based products rest heavily on the shoulders of healthcare professionals. Addressing concerns about unauthorized, and therefore unsupervised, use of cannabis among oncology patients is a priority in hospital institutions and community-based organizations. While we face these challenges in Canada, we felt it appropriate and timely to share our lessons learned for healthcare professionals in other jurisdictions.

Lessons to be shared

Listed below is a summary of the shared knowledge and clinical experiences from our team of multidisciplinary healthcare practitioners and researchers to support the integration of medical cannabis in supportive cancer care:

- Stay up to date with your local regulations, many countries have rapidly evolving regulations;
- Pay attention to legal status, some common practices are not actually legal;
- Conflicts between federal and regional or local legislation may exist;
- International travel is not permitted;
- During the formation or reform of a medical cannabis access program, take opportunities to contribute to consultation periods or testify to governmental committees;
- Consider partnership between institutions and community-based clinics for knowledge sharing, training, and ongoing collaboration;
- Complete a thorough medical assessment, screening for potential contraindications to determine suitability of a cannabis-based treatment;
- Inquire about previous cannabis experience including benefits and risks;
- Complete a treatment agreement clarifying patient expectations and misconceptions;
- Tailor the treatment plan to meet specific predetermined goals, such as relieving cancer-related symptoms or side effects from oncologic treatments (i.e., chemotherapy, radiotherapy, etc.);
- Choose the product (i.e., THC-rich, CBD-rich, THC/CBD 1:1 ratio, nabilone, nabiximols), route of administration (i.e., oral, inhaled, topical), and initial dosage, in collaboration with an interdisciplinary team that has a solid knowledge of the pharmacokinetics and side effects of these products [16];
- Educational sessions encourage patient and physician participation;
- Adverse events are often dose-related; titration should be monitored closely;
- Practical guidelines are still lacking; however, recommendations in these types of settings have begun to emerge in the literature [17];
- Only the development of well-designed clinical trials will eventually determine the true efficacy of medical cannabis treatments. Encourage development of medical cannabis research at every opportunity.

These lessons in integration require collaboration and responsive, affirmative public policies. Accordingly, as we keep learning from published clinical trials and real-world evidence, discussions between practitioners, patients, and policy makers must continue locally, nationally, and across international borders. Such dialogue is critical to achieve medical cannabis access program that meet all stakeholder needs.

Authors' contributions All authors contributed to conception and design, manuscript writing, and final approval.

Compliance with ethical standards

Conflict of interest Dr. Maria Fernanda Arboleda declares the following possible conflicts of interest: International Director of Medical Services, Khiron Life Sciences Corporation. Associate Research Director of Santé Cannabis, a medical clinic and research centre. Co-investigator for clinical trials sponsored by Tetra Bio-Pharma Inc. Erin Prosk declares the following possible conflicts of interest: Director of Santé Cannabis, a medical clinic and research centre. Dr. Claude Cyr declares the following possible conflicts of interest: Honoraria and Advisory Boards: Spectrum, Shoppers/Inventiv, Tilray, Aurora. Rihab Gamaoun: McGill University Post-Doctoral Research Fellow sponsored by Tetra Bio-Pharma Inc. Dr. Antonio Vigano: Research Director of Santé Cannabis. Principal Investigator for clinical trials sponsored by Tetra Bio-Pharma Inc. Honararia and Advisory Boards: Spectrum Therapeutics, Tilray, EmpowerPharm.

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