CORTICOSTEROID-INDUCED HYPERGLYCEMIA

A WATERLOO WELLINGTON REGIONAL APPROACH TO MANAGEMENT

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INTRODUCTION

The Waterloo Wellington Regional Coordination Centre (WWRCC) is a centralized coordination and referral centre designed to streamline access to healthcare services.

Waterloo Wellington Diabetes (WWD), a program of the WWRCC, provides centralized intake for:

- Diabetes education referrals
- Specialist referrals for diabetes care

WWD chairs two Regional Diabetes Networks (RDNs) focusing on adult and pediatric care with the aim to:

- Promote best practice and regional consistency in care
- Identify areas of concern and problem-solve
- Provide an opportunity for collaboration

IDENTIFIED AREA OF CONCERN

RDN membership raised concerns of the growing number of urgent referrals for patients experiencing corticosteroid-induced hyperglycemia, also known as steroid-induced hyperglycemia (SIH).

Problem:
Growing number of referrals with urgent glucose levels due to SIH

- Lack of standardized approach to care and management of SIH
- Gap in existing Diabetes Canada guidelines
- Need for targeted healthcare provider education

RDN discussions led to the formation of a multidisciplinary working group with the aim to create an evidenced-based SIH educational resource.

LITERATURE REVIEW

The SIH working group conducted an extensive literature review to evaluate SIH prevalence and existing treatment guidance.

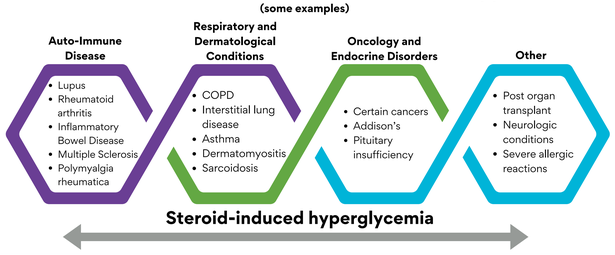
SCOPE OF THE ISSUE

Corticosteroids are widely prescribed for their anti-inflammatory and immunosuppressive effects but can cause significant metabolic side effects: insulin resistance and increased gluconeogenesis, often leading to hyperglycemia, metabolic decompensation, and weight gain.

Impact: Hyperglycemia increases the risk of infection, hospitalization, HHS/DKA, chemotherapy delays and mortality

Despite known risks, corticosteroids are often prescribed without adequate patient education or hyperglycemia risk assessment. The lack of clear Canadian practice guidelines leads to inconsistent approaches to care, poorer patient outcomes, and higher healthcare costs.

Clinical Indications for Corticosteroid Therapy
(some examples)



RESPONSE TO THE ISSUE

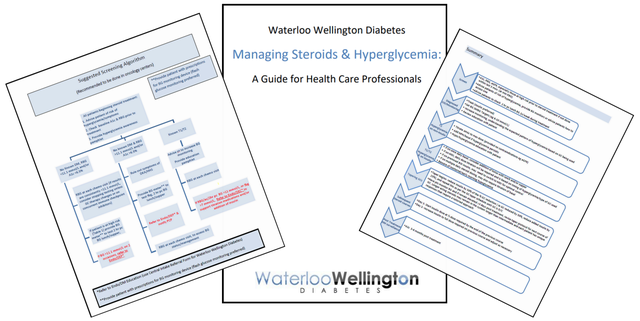
- SIH working group reviewed evidence from literature.
- Created and disseminated evidenced-based SIH practice alert to regional healthcare providers (HCPs).
- Developed evidenced-based SIH guidance to management document and patient education handout.

DOCUMENT AIM

- To alert and help provide evidenced-based guidance to HCPs to optimize care and clinical outcomes.
- Ask HCPs to risk stratify by screening patients prior to therapy initiation.
- To standardize care and reduce the burden of preventable hyperglycemic complications in vulnerable populations.
- In higher risk populations: educate of risk, advise to monitor glucose (provide prescription) during and after therapy, and refer to Diabetes Education and/or Endocrinology.

DOCUMENT KEY FEATURES

This document outlines the impact of SIH, suggested screening algorithm, corticosteroid comparison and effects on glycemia. The guide covers SIH management: glucose targets, insulin initiation, titration, monitoring, and non-insulin options, including visual algorithms to support clinical decision-making and implementation.



KNOWLEDGE TRANSFER

Recipient of Knowledge to Action (K2A) grant to aid in dissemination of guide, create national educational webinar for HCPs, and share resources.

Disseminate:
Webinar creation with leading Canadian Endocrinologist

Disseminate:
Diabetes Canada poster presentation and pursue academic journal publication

Advocate:
For clinical practice guideline development

Positive feedback was received.
Webinar was impactful with **390 registrants** where **93.5%** of attendees intended to make a change in clinical practice, and **100%** would recommend the webinar to a colleague.

POST-WEBINAR PRACTICE CHANGES