crohn's colitis

Name of Clinical Care Pathway

Vitamin D Replacement

Objective

Monitor for and manage vitamin D deficiency

Patient Population

Adults (18+ years) with a known diagnosis of IBD and low serum 25-hydroxyvitamin D

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These clinical decision support tools were developed by Canadian experts in IBD, based on their interpretation of current evidence and considerations specific to Canadian healthcare. International guidelines from Europe and the United States are available. However, these may reflect regional factors not directly applicable in Canada.

Abbreviations

CCP	Clinical Care Pathway
GP	General Practitioner
IBD	Inflammatory Bowel Disease
IM	Intramuscular
IU	International Units
OTC	Over-the-Counter
Rx	Prescription

Highlights from this CCP

Vitamin D deficiency is common among IBD patients. Restoring and maintaining appropriate levels of vitamin D may help maintain remission.

Introduction

This care protocol provides a general guideline for monitoring and managing vitamin D deficiency in adults with inflammatory bowel disease. The availability of the listed options for vitamin D replacement may vary across organizations.

IBD provider:

1. Check serum vitamin D annually:
    - If 75-125nmol/L - recommend 1000 - 2000 IU daily
    - 50-75 nmol/L – recommend 5000-10000 IU daily, or replace
    - Replace if <50 nmol/L
2. Re-assess vitamin D levels at 4 months, if vitamin D deficiency is identified.
3. In patients with low vitamin D levels, consider assessment for underlying causes of malabsorption (including celiac disease) where clinically appropriate.
4. Generate a vitamin D replacement prescription as per the options for replacement below and give it to the support staff.

Support staff:

1. Use letter templates for low vitamin D and send them to the patient and one to the patient's GP.
2. Print a bloodwork requisition to test vitamin D and calcium levels for the patient to complete in 4 months.
3. Parenteral vitamin D needs to be compounded. Therefore, it is important to establish a strong working relationship with a compounding pharmacy.

Table 1: Options for replacement

Type of vitamin D	Availability	Dosage	Form	Route
Vitamin D3	OTC	400 IU, 1000 IU	Tablet	Oral
Vitamin D3 (D-VI-SOL)	OTC	400 IU/ml,	Liquid	Oral
Vitamin D3 (DROPS)	OTC	600 or 1000 units/drop (5ml=180drops)	Liquid	Oral
Vitamin D3 (Euro-D)	Rx	10,000 IU	Capsule	Oral
Vitamin D3	Rx	2000-75,000 IU	Capsule/Tab	Oral
Vitamin D2 (OSTO-D2, D-FORTE)	Rx	50,000 IU	Capsule	Oral
Calcitriol (ROCALTROL)	Rx	0.25ug, 0.5ug	Capsule	Oral
Cholecalciferol (in sesame oil)	Rx	250,000 - 500,000 IU	Injection	Intramuscular

Note: Vitamin D3 may have a longer half-life than vitamin D2 and may be more potent, causing two- to threefold greater storage of vitamin D. Vitamin D3 is preferred over vitamin D2.

Table 2: Recommended dose

Vitamin D level	Intramuscular**
50-75 nmol/L	250,000 IU x 1
<50 nmol/L	500,000 IU x 1

** Not applicable to pediatrics

Note: Indications for Intramuscular (IM) vitamin D therapy

- May be considered following a trial of oral vitamin D supplementation.
- Recommended in cases of profound vitamin D deficiency (serum concentration < 25 nmol/L).
- May be initiated in patients presenting with clinical symptoms such as fatigue, without prior oral therapy.
- Preference for patients with a history of multiple intestinal resections (≥ 2).

Resources for Providers

RxFiles: Vitamin D supplementation evidence (PDF)

Resources for Patients

UpToDate: Vitamin D deficiency (Beyond the Basics) (link)

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