

**Evidence-Based Practice Group Answers to Clinical
Questions**

**“Development of Lymphocytic Colitis post-
Giardiasis, or as Co-infection with
Dientamoeba Fragilis or Blastocystis
Hominis”**

A Rapid Systematic Review

By

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Clinical Services – Worker and Employer Services

About this report

Development of Lymphocytic Colitis post-Giardiasis, or as Co-infection with Dientamoeba fragilis or Blastocystis Hominis

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About the Evidence-Based Practice Group

The Evidence-Based Practice Group was established to address the many medical and policy issues that WorkSafeBC officers deal with on a regular basis. Members apply established techniques of critical appraisal and evidence-based review of topics solicited from both WorkSafeBC staff and other interested parties such as surgeons, medical specialists, and rehabilitation providers.

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Background

Lymphocytic Colitis is a cause of chronic watery diarrhea. It is related to collagenous colitis, and together these two disorders are more broadly categorized as microscopic colitis, with normal radiologic and endoscopic findings, but typical histological features on biopsies. Population-based studies in Europe have reported an annual incidence rate ranging from 3.1 to 4.4 per 100,000 persons and a prevalence of 14.2 per 100,000 population. A population-based study in the United States reported an annual incidence of Lymphocytic Colitis at 9.8 per 100,000 persons and a prevalence of 64 per 100,000 population^(4,8,9). At present, the etiology and pathogenesis of Lymphocytic Colitis are uncertain, although links to genetics, autoimmune disorders, abnormalities in fluid homeostasis, medication side effects including the use of nonsteroidal anti-inflammatory drugs and proton-pump inhibitors, infection, bile acid malabsorption and abnormal collagen metabolism have been suggested⁽⁹⁾. With regard to infection, so far, there is no causative organism identified^(8,9).

Objectives

1. To determine whether there is any evidence to support an (causal) association for the development of Lymphocytic Colitis post-Giardiasis infection.
2. To determine whether coinfection with *Dientamoeba Fragilis* or *Blastocystis Hominis* plays any role in the development of Lymphocytic Colitis.

Methods

- A systematic literature search was conducted on October 21, 2020.
- The search was done on commercial medical literature databases, including ACP Journal Club[®] (1991 to September 2020), BIOSIS Previews[®] (1969 to 2008), Embase[®] (1974 to 2020 October 20), Medline Epub Ahead of Print[®], Medline In-Process & Other Non-Indexed Citations[®], Medline Daily[®] and Medline[®] (1946 to October 20, 2020), Joanna Briggs Institute EBP Database[®] (Current to October 14, 2020), Cochrane Clinical Answers[®] (September 2020), that are available through the Ovid[®] platform.
- Combinations of keywords were employed in this literature search. These keyword combinations included:
 1. (giardiasis **OR** (giardia **ADJ** lamblia)) **AND** (lymphocytic **ADJ** colitis)
 2. (dientamoeba **ADJ** fragilis) **AND** (lymphocytic **ADJ** colitis)

3. (blastocystis **ADJ** hominis) **AND** (lymphocytic **ADJ** colitis)
- No limitations, such as on the year and language of publication, were implemented in this literature search.
 - A manual search was also conducted on the references of the articles that were retrieved in full.

Results

- Six⁽¹⁻⁶⁾ published studies were identified through search No. 1. Search No. 2 returned no results, and search No. 3 returned one⁽⁷⁾ published study. Upon examination of the titles and abstracts of these seven⁽¹⁻⁷⁾ studies, three^(1,3,4) studies were thought to be relevant and were retrieved in full for further appraisal.
- Two⁽⁸⁻⁹⁾ additional studies were added from the manual search. As such, there were five^(1,3,4,8,9) studies retrieved in full for further appraisal in this systematic review.
- None of the three^(1,3,4) primary studies provided any data on the potential (causal) association between exposure/infection with Giardia Lamblia and/or Dientamoeba Fragilis and/or Blastocystis Hominis and the development of Lymphocytic Colitis, while the two^(8,9) review articles also did not provide any evidence/data to support the development of post-infection Lymphocytic Colitis.

Summary

- At present, there is no data to support the (causal) association between exposure/infection with Giardia Lamblia and/or Dientamoeba Fragilis and/or Blastocystis Hominis and the development of Lymphocytic Colitis.
- At present, the etiology of Lymphocytic Colitis is still unclear.

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Appendix 1

WorkSafeBC - Evidence-Based Practice Group Levels of Evidence

(adapted from 1,2,3,4)

1	Evidence from at least 1 properly randomized controlled trial (RCT) or systematic review of RCTs.
2	Evidence from well-designed controlled trials without randomization or systematic reviews of observational studies.
3	Evidence from well-designed cohort or case-control analytic studies, preferably from more than 1 centre or research group.
4	Evidence from comparisons between times or places with or without the intervention. Dramatic results in uncontrolled
5	Opinions of respected authorities, based on clinical experience, descriptive studies or reports of expert committees.

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