Increased Intestinal Permiability (IP) in Subjects With Irritable Bowel Syndrome (IBS) Two Years After The Walkerton Outbreak of Waterborne Gastroenteritis

A study following Walkerton residents with Irritable Bowel Syndrome (IBS) has drawn a direct link between IBS and increased intestinal permeability (IP). Released February 27, 2004 at the Canadian Digestive Diseases Week (CDDW), it is the largest study of its kind.

The study is part of the much larger Walkerton Health Study, which is following the residents of Walkerton, Ont. who were subject to bacterial contamination of their water supply in 2000. Several people died.

Many Walkerton residents have continued to suffer abdominal pain and changes in bowel habit, a condition called post-infectious IBS. “It’s a common phenomenon all clinicians will recognize,” researcher Dr. John Marshall said. “One of the frustrating things with IBS is people can describe the symptoms, but clinicians struggle to find the source and explanation for these symptoms, so patients feel they’re dismissed,” said Dr. John Marshall (Assistant Professor of Medicine, McMaster University). “It can be a nuisance or quite disabling, and many people in Walkerton remain unwell.”

This study found a direct link between increased IP and symptoms of IBS two years after the outbreak. Increased IP means the bowel lining allows more particles and chemicals to pass through, which could irritate its deeper tissue layers. There were 218 eligible subjects (132 IBS cases, 86 non-IBS controls). Many of the subjects (but not all) had suffered from acute gastroenteritis during the outbreak. Subjects ingested a solution at bedtime (lactulose 5g mannitol 2g and sucrose 100g) and collected their urine. Abnormal IP was more prevalent among the IBS cases.

“This is an exciting observation, and may help to explain how the symptoms of IBS are generated. But it’s only a small piece of the puzzle. We need to learn more mechanisms and we want to follow our patients to see if abnormal IP leads to other problems including a different condition, Inflammatory Bowel Disease.”

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