

Endoscopic and histopathologic characteristics of *H. pylori* infection in a Canadian Arctic hamlet

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Abstract:

The Aklavik *H.pylori* Project is the start of a community-driven collaboration to investigate *H.pylori* infection in northern Canada. Goals are to describe the *H.pylori*-associated disease burden and reduce related health risks. All residents of the predominantly aboriginal hamlet of Aklavik, NWT (population ≈600) were invited to participate. This report describes endoscopic and histopathologic findings in those who consented to upper gastrointestinal endoscopy in February 2008. Endoscopy equipment was transported temporarily to the local health center. Visiting gastroenterologists performed transnasal ultrathin gastroscopies and obtained gastric biopsies (2 antrum, 2 corpus, 1 incisura). Each biopsy was processed with H&E and Giemsa stains and evaluated microscopically by a single pathologist using the updated Sydney system. Among 194 participants (aged 10-80 yrs) who completed endoscopy with biopsies, frequency of endoscopic abnormalities was: 10.4% esophagitis, 2.6% Barrett's esophagus; 13.8% gastritis; 6.2% gastric erosions; 3.1% gastric ulcers; 6.7% duodenitis; 0.5% duodenal erosions; 0 duodenal ulcers; 0 gastric cancers. Histopathologic findings appear in the table for Aklavik's major ethnicities (excluding 8 other, 1 missing). This project has identified a high-risk population in need of effective strategies for reducing *H.pylori*-associated health risks.

	<i>n</i>	<i>H.pylori</i> +	Severe inflammation	Atrophy	Intestinal metaplasia
Inuit	114	70.2%	31.6%	14.0%	9.6%
Dene First Nation	53	69.8%	32.1%	17.0%	5.7%
Non-aboriginal	18	22.2%	11.1%	11.1%	5.6%
All <i>H.pylori</i> +	129	-	43.4%	20.9%	10.9%
All participants	194	66.5%	28.9%	13.9%	8.2%