Cancer Association of South Africa (CANSA)

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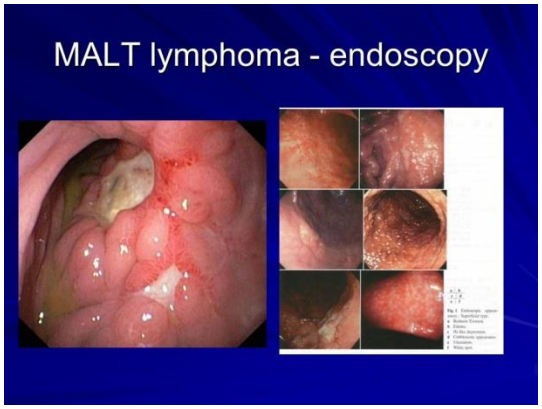
Fact Sheet on Mucosa Associated Lymphoid Tissue (MALT) Lymphoma

Introduction

Like all lymphomas, Mucosa Associated Lymphoid Tissue (MALT) Lymphoma, is a cancer of the lymphatic system which is part of the body's immune system. It develops when white blood cells, called B-lymphocytes, become abnormal and begin to grow in an uncontrolled manner.



[Picture Credit: MALT Lymphoma]

MALT Lymphoma

MALT lymphoma or Marginal Zone Lymphomas are B-cell lymphomas. They are not very common and account for a small percentage of non-Hodgkin's lymphomas (NHLs). There are 3 main types of marginal zone lymphomas:

- extranodal marginal zone lymphoma of mucosa-associated lymphoid tissue (MALT lymphoma). MALT lymphomas may also be called maltomas.
- Nodal marginal zone lymphoma
- Splenic marginal zone lymphoma

Extranodal marginal zone lymphomas start in tissues or organs outside of the lymph nodes (extranodal). MALT lymphoma develops in mucosa-associated lymphoid tissue, in the mucosa or tissue that lines body organs or body cavities including:

- gastrointestinal (GI) tract
  - The stomach is the most common location for MALT lymphoma, but it can also occur in the small bowel and colon
- lungs
- eyes, including the orbit (bony cavity that the eyeball sits in)
- skin
- salivary glands

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- thyroid gland
- breasts

Zucca, E. & Bertoni, F. 2016.
"Extranodal marginal zone (MZ) B-cell lymphomas of the mucosa-associated lymphoid tissue (MALT) arise from lymphoid populations that are induced by chronic inflammation in extranodal sites. The best evidence of an etiopathogenetic link is provided by the association between Helicobacter pylori-positive gastritis and gastric MALT lymphoma. Indeed, successful eradication of this microorganism with antibiotics can be followed by gastric MALT lymphoma regression in most cases. Other microbial agents have been implicated in the pathogenesis of MZ lymphoma arising at different sites. Apart from gastric MALT lymphoma, antibiotic therapies have been adequately tested only in ocular adnexal MALT lymphomas where upfront doxycycline may be a reasonable and effective initial treatment of patients with Chlamydophila psittaci-positive lymphomabefore considering more aggressive strategies. In all other instances, antibiotic treatment of nongastric lymphomas remains investigational. Indeed, there is no clear consensus for the treatment of patients with gastric MALT lymphoma requiring further treatment beyond H pylori eradication or with extensive disease. Both radiotherapy and systemic treatments with chemotherapy and anti-CD20 antibodies are efficacious and thus the experience of individual centers and each patient's preferences in terms of adverse effects are important parameters in the decision process."

Incidence of MALT Lymphoma in South Africa
The National Cancer Registry (2014) does not provide any information regarding the incidence of MALT Lymphoma.

Signs and Symptoms of MALT Lymphoma
Symptoms depend on where the MALT lymphoma starts. The most common symptoms of MALT lymphoma that starts in the stomach is indigestion or heartburn. Some people also have weight loss, feeling or being sick and stomach (abdominal) pain.

In most people gastric MALT lymphoma is found during tests for persistent indigestion – although only a very small percentage of people with indigestion or heartburn will have lymphoma.

A few people with gastric MALT lymphoma go to their doctor with other symptoms, such as abdominal pain, nausea (feeling sick), vomiting (possibly with specks of blood in the vomit) and weight loss. Some people will have symptoms of anaemia, such as tiredness and shortness of breath, because the stomach lining has been bleeding, but this is quite rare. Severe abdominal pain or the finding of a lump or mass in the abdomen would also be unusual.

Diagnosis of MALT Lymphoma
For a gastric MALT lymphoma to be diagnosed, the stomach lining has to be examined and biopsied. Tests for *H. pylori* infection are also needed to confirm the diagnosis.

Violeta Flip, P., Cuciureanu, D., Sorina Diaconu, L., Maria Vladareanu, A. & Silvia Pop C. 2018.
"Primary gastric lymphoma (PGL) represents a rare pathology, which can be easily misdiagnosed because of unspecific symptoms of the digestive tract. Histologically, PGL can vary from indolent marginal zone B-cell lymphoma of the mucosa-associated lymphoid tissue (MALT) to aggressive diffuse large B-cell lymphoma (DLBCL). During the years, clinical trials revealed the important role of Helicobacter pylori (H. pylori) in the pathogenesis of gastric MALT lymphoma. Infection with Helicobacter pylori is an influential promoter of gastric lymphomagenesis initiation. Long-term studies revealed that eradication therapy could regress gastric lymphomas."

Endoscopy - MALT lymphoma is usually discovered unexpectedly during an endoscopy examination of the stomach. This is a test in which a flexible tube with a light and a tiny camera in its tip is passed down through the mouth into the stomach.

Biopsy - It is very difficult, and often impossible, to tell the difference between lymphoma and the much more common kind of stomach cancer just by looking at these ulcers or nodules during the endoscopy examination, so small samples of the stomach lining – biopsies – will be taken during the endoscopy.

Cytogenetics tests. These specialised tests help the doctors to predict how well the lymphoma is likely to respond to therapy.

Testing for *H. pylori* organisms - It is very important that the presence of the *H. pylori* organism is confirmed so that a firm diagnosis can be made.

Salar, A. 2019.
"Marginal zone lymphomas of the MALT type are a type of B-cell neoplasms that involve extranodal tissues and have an indolent clinical behaviour. The stomach is the most common site and most patients are infected by Helicobacter pylori. An increase in the resistance of this bacterium to several antibiotics has been observed in the last years and this fact has determined the review of treatment guidelines. In areas with resistance to clarithromycin greater than 15%, classical triple therapy should be abandoned and quadruple regimens with or without bismuth are currently recommended. Thus, these new guidelines for eradication treatment should be applied to patients with gastric MALT lymphoma associated with H. pylori infection."

Staging of MALT Lymphoma
The aim of staging is to assist the treating physician in deciding on the treatment regimen.

Treatment of MALT Lymphoma
The usual initial treatment for gastric MALT lymphoma is a course of treatment to eradicate the *H. pylori* infection. This will successfully treat the lymphoma in most people who showed evidence of *H. pylori* infection in their tests.

Treatment is usually most successful when the tumour has not extended very far through the stomach wall and has not spread to the lymph nodes.

Thieblemont, C. & Zucca, E. 2017.
"Extranodal marginal zone B-cell lymphomas of the mucosa associated lymphoid tissue (MALT) arise from lymphoid populations that are induced by chronic inflammation in extranodal sites. Among the MALT lymphomas, gastrointestinal (GIT) MALT lymphoma is the most frequent compared to non-GIT MALT lymphoma arising from other sites. Gastric MALT lymphoma has been the first to be described with the evidence of an etiopathogenetic link provided by the association between Helicobacter pylori-positive gastritis and gastric MALT lymphoma. Indeed, successful eradication of this micro-organism with antibiotics can be followed by a lymphoma regression in most cases. When there is no association with Helicobacter pylori, there is no clear therapeutic consensus. Both radiotherapy and systemic treatments with chemotherapy and anti-CD20 antibodies are efficacious and thus the experience of individual centers and each patient's preferences in terms of adverse effects are important parameters in the decision process."

Follow-up Upon Completion of Treatment
After the course of eradication therapy the patient should have a test (usually a breath test) to check for *H. pylori* about 4–6 weeks after the treatment has finished. About 3–6 months after the treatment has finished the patient will usually have another endoscopy.

About Clinical Trials
Clinical trials are research studies that involve people. They are conducted under controlled conditions. Only about 10% of all drugs started in human clinical trials become an approved drug.

Clinical trials include:

- Trials to test effectiveness of new treatments
- Trials to test new ways of using current treatments
- Tests new interventions that may lower the risk of developing certain types of cancers
- Tests to find new ways of screening for cancer

The South African National Clinical Trials Register provides the public with updated information on clinical trials on human participants being conducted in South Africa. The Register provides information on the purpose of the clinical trial; who can participate, where the trial is located, and contact details.

For additional information, please visit: www.sanctr.gov.za/

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Chronic Illness Support
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