

Chapter 11

GASTRIC MUCOSA-ASSOCIATED LYMPHOID TISSUE LYMPHOMA

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Introduction

The marginal zone of B-cell follicles is especially well developed in lymphoid organs that are continuously exposed to antigenic stimulation. The marginal zone is easily observed in the spleen and to a lesser extent, in mucosa-associated lymphoid tissues, whereas it is scarcely identifiable in lymph nodes. In the spleen, the marginal zone has a crucial role in T-cell-independent responses to various antigens, including polysaccharides derived from encapsulated bacteria, such as *Streptococcus pneumoniae*, *Neisseria meningitidis*, and *Haemophilus influenzae* [Weill, Weller & Renaud, 2009].

The mucosa-associated lymphoid tissues (MALT) are diffusely organized aggregates of lymphocytes that protect the respiratory and gastrointestinal epithelium [MacDonald,2003]. MALT lymphoma is an indolent B-cell neoplasm involving most often the stomach, where it usually follows chronic gastritis due to *Helicobacter pylori* (*H. Pylori*) infection. The majority of patients with low-grade gastric MALT lymphoma treated by *H. pylori* eradication have showed good effect. Furthermore, radiation therapy, chemotherapy, biological therapy and radioimmunotherapy are also effective methods for MALT lymphoma. As a result, MALT lymphoma usually has a favorable outcome, with an overall 5-year survival rate 85 % reported in most series [Guo,Guo &Zhang, 2013].

Epidemiology

Although lymphomas mainly involve lymph nodes, spleen, and bone marrow, extranodal non-Hodgkin's lymphomas (NHL) account for 24-29% of all the lymphomas in the USA, Canada and Taiwan, 36-44% in Israel, Denmark, the Netherlands, and Lebanon, and 48% in Italy. The gastrointestinal tract is the most frequent site of extranodal lymphoma, and the stomach is involved in up to two-thirds of these cases. Indeed, 30-45% of all extranodal lymphomas are detected in the stomach. While its frequency is rising in the last decades, primary gastric lymphoma remains a rare disease, representing nearly 2-8% of all tumors of the stomach. There are some geographic areas, such as north-eastern Italy, where the frequency of primary

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