

## **ABSTRACT**

Celiac sprue is a chronic, lifelong disease characterized by permanent intolerance to gluten. Small intestinal mucosa of these patients shows typical inflammatory changes. These changes lead to reduced absorption of nutrients, minerals and vitamins that may result malabsorption syndrome. Diagnosis of celiac disease must be a comprehensive evaluation of the results of immunological testing of autoantibodies and microscopic evaluation of the intestinal mucosa state. The bachelor thesis deals with the histochemical examination of intestinal biopsies, which allows better distinguish malabsorption syndromes of different origin. The aim of the study was to determine incidence of celiac sprue and evaluate the completeness of remission in patients on a gluten - free diet in patients aged over 50 years in intestinal biopsies samples taken in 2013. Strict gluten - free diet leads to reparation of mucosa and brush border enzyme activity. Biopsies were snap frozen immediately after collection, to preserve the morphology of tissue and the brush border enzyme activity. Reactions, demonstrating the enzymatic activity of the lactase, trehalase and dipeptidylpeptidase IV, were exercised on sections by previously described histochemical methods. Alteration of relief was assessed by Marsh score.

In 2013 was recieved to the histochemistry dept. 691 biopsies. Of this number 141 patients was aged over 50 years. Celiac sprue was concluded in 19 samples. In patients with newly diagnosed celiac disease 9 was found damage of mucosal relief with varying degrees of reduced brush border enzyme activities. In patients with already proven celiac disease, who adhere to a gluten - free diet, changes in the mucosa depended on the duration of the diet. A complete remission was seen only in 6 patients. One of the most common reason for lack of complete mucosal healing in is insufficient adherence to strict gluten - free diet, that disrupts long - term eating habits of the matured patients. However, higher age at diagnosis of celiac disease may not lead to full restoration of the brush border enzyme activities, even with strict adherence to a gluten - free diet.