

## **Streszczenie w j. angielskim**

**Introduction:** Crohn's disease is an inflammatory bowel disease that is a chronic disease involving the ileum and/or large intestine. At the same time, it can affect any other part of the human body, from the mouth to the anus. The symptoms are very troublesome and cause a significant reduction in the quality of life, and sometimes even disability and permanent damage to the gastrointestinal tract, which requires enteral or parenteral nutrition for the rest of life.

**Aim:** The aim of the study was to investigate tissue metalloproteinases as markers of Crohn's disease recurrence.

**Methods:** The experimental groups included 30 patients aged 23 to 70 years, with a mean age of 40.4 years. The harvested tissues were frozen and then the comminuted tissues were homogenized with Ripa Lysis buffer on ice. The supernatant was capped and four metalloproteinases - MMP 3, MMP 7, MMP 8 and MMP 9 - were analyzed by enzyme immunoassay using kits SEA101HU, SEA102Hu, SEA103Hu and SEA553Hu (Cloud-Clone Corp., Kata, TX, USA). All chemical analyzes were performed in triplicate. Metalloproteinase content was expressed as mean  $\pm$  standard deviation.

**Results:** The tests confirmed that MMP 3 and MMP 8 significantly affected the possibility of recurrence of Crohn's disease. In contrast, MMP7 and MMP 9 showed no effect on Crohn's disease recurrence.

**Conclusions:** Studies have shown that the determination of patients' metalloproteinase concentrations can contribute to a thorough analysis of the consequences associated with the presence of disease-causing agents.