

S100 proteins in inflammatory bowel disease and colorectal neoplasia

Inflammatory bowel disease and colorectal cancer represent a serious medical and socio-economic problem worldwide. Despite the progress in diagnostic of both diseases, there is no specific serum maker, which would allow to detect risk group of patients. Our paper focused on importance of serum S100 proteins in inflammatory bowel disease and colorectal neoplasia: (1) association of serum S100A4 with inflammatory bowel disease, ulcerative colitis and Crohn's disease, (2) association of serum S100A6, S100A8, S100A9 and S100A11 with colorectal neoplasia and (3) association of serum S100P with colorectal cancer. A total of 253 subject were enrolled: 40 healthy controls, 16 patients with ulcerative colitis, 93 patients with Crohn's disease, 20 patients with non-advanced colorectal adenoma, 20 patients with advanced colorectal adenoma and 62 patients with colorectal cancer. We confirmed significantly higher serum concentrations of S100A4 protein in patients with ulcerative colitis and Crohn's disease. In Crohn's disease, serum S100A4 was significantly higher in patients with colonic and ileocolonic involvement. We did not confirm association of serum S100A4 with fibrostenosing phenotype of Crohn's diseases and with perianal involvement. We showed significantly lower serum S100A6 and S100A11 and significantly higher S100A8 and S100P in patients with colorectal cancer. Serum S100P was significantly higher in in patients with colorectal cancer in clinical stage IV and in moderately-differentiated tumours. Association of selected S100 protein with inflammatory bowel disease and colorectal cancer was confirmed.