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Expression pattern of PDE4B, PDE4D and SFRP5 markers in the colorectal cancer

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Colorectal cancer (CRC) is the most frequently diagnosed malignant disease of the gastrointestinal system and new diagnostic and prognostic markers are needed to elucidate complete tumor profile. We used CRC tumor tissues (Dukes A-D) and adjacent noncancerous tissues of 43 patients. Immunohistochemistry was used to examine the expression of PDE4B, PDE4D and SFRP5 markers. In CRC stages, the distribution of PDE4B positive cells varied, with differing percentages between epithelium and lamina propria. Statistically significant differences were found in the number of PDE4B positive epithelial cells between healthy controls and all CRC stages, as well as between different CRC stages. Similarly, significant differences were observed in the number of PDE4B positive cells in the lamina propria between healthy controls and all CRC stages, as well as between different CRC stages. CRC stage Dukes' C exhibited a significantly higher number of PDE4B positive cells in the lamina propria compared to CRC stage Dukes' B. Significant

differences were noted in the number of PDE4D positive epithelial cells between healthy controls and CRC stages Dukes' A, B, and D, as well as between CRC stage Dukes' C and stages A, B, and D. CRC stage Dukes' A had significantly more PDE4D positive cells in the lamina propria compared to stage D. Significant differences were also observed in the number of SFRP5 positive cells in the lamina propria between healthy controls and all CRC stages, as well as between CRC stages Dukes' A and D. While the expression of PDE4D varied across CRC stages, the expression of SFRP5 remained consistently strong in both epithelium and lamina propria, with significant differences noted mainly in the lamina propria. These findings suggest alterations in PDE4B, PDE4D and SFRP5 expression during CRC progression, as well as between different stages of CRC with potential implications for understanding the molecular mechanisms involved in CRC development and progression.

Biography

As a General Surgery Resident at Sveučilišna klinička bolnica Mostar, I am passionate about providing high-quality and compassionate care to patients with various surgical conditions. I have a Doctor of Medicine degree from University of Mostar, School of Medicine, where I gained a solid foundation in medical sciences and clinical skills. I have also worked as a Doctor of Medicine at Sveučilišna Klinička bolnica Mostar and Medical urgent center, where I gained valuable experience in emergency medicine, trauma, and critical care. I have developed surgical skills, such as performing basic and advanced procedures, assisting in complex operations, and managing postoperative complications. I am eager to learn from my mentors and colleagues, and to contribute to the advancement of the field of surgery. I am committed to excellence, ethics, and innovation in my profession.