Impact of Age on Surgical and Oncological Outcomes of Colorectal Cancer in Saudi Arabia

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ABSTRACT

Colorectal cancer (CRC) is a leading cause of cancer-related morbidity and mortality worldwide. Understanding age-related differences in CRC presentation and outcomes is essential for optimizing care. This study aims to compare clinicopathological characteristics and oncological outcomes between elderly (>65 years) and younger patients undergoing CRC resection, and to identify predictive factors for post-operative morbidity and mortality in both groups. A retrospective study analyzed 238 patients who underwent curative resection for CRC from 2013 to 2020. Demographic, clinical, surgical, and pathological outcomes were compared between the two age groups. Multivariate regression models were applied to assess the association between various factors and morbidity and mortality. A total of 85 (35.7%) cases were among individuals aged 65 years and older. Compared to younger patients, the elderly were more likely to be admitted to the ICU (58.8% vs 30.1%, p < 0.001) and receive intra-operative blood transfusion (42.4% vs 25.5%, p = 0.011). In contrast, perineural invasion was more common in younger patients (25.2% vs 8.6%, p = 0.005). The overall survival (OS) was significantly higher in younger patients than in elderly patients. For elderly patients, post-operative morbidity was significantly associated with 30-day post-operative blood transfusion, while mortality was predicted by N stage (pN), positive margins, intra-operative blood transfusion, 30-day post-operative blood transfusion, cerebrovascular disease, and myocardial infarction. In comparison, mortality in younger patients was predicted by pN and total neoadjuvant therapy to the rectum. Elderly patients had poorer OS than younger patients, most likely due to other causes of death competing with cancer in this age group. Pre-operative risk optimization is crucial for addressing the factors associated with short-term and long-term outcomes.

Keywords: colorectal cancer; elderly; morbidity; survival

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