CHAPTER 18

Evolution of colon cancer in the last 15 years

In a recent study, Horesh et al.1 analyzed colon cancer treatment outcomes in the United States over 15 years and found a significant and alarming increase in patients with metastatic disease, approximately 20% over the period. Furthermore, it was found that while the proportion of patients treated with systemic chemotherapy remained stable over time, the use of multiple chemotherapeutic agents increased by 61%, which is likely the main reason for the improved 5-year OS in stage III patients. Another significant change was the increase in the use of immunotherapy from 3 to 7.6%, highlighting its benefits. especially in patients with metastatic CRC. The authors cite improved progression-free survival in patients with dMMR, known as unstable (78 vs. 11% in the control group). In addition, they found that immunotherapy was more frequently used in left-sided tumors.

Regarding surgical technique, one of the most significant changes in the last decade has been the increased use of minimally invasive surgery by laparoscopic and robotic means, with demonstrated superiority in the short term (shorter hospital stay, fewer readmissions, lower incisional hernia rate) and in the long term (lower morbidity and mortality).^{2,3}

According to the authors, these changes in colon cancer treatment have contributed to improved long-term outcomes, probably with a greater benefit in patients with stage III and stage IV. This latter finding was also confirmed by a study from the Netherlands for patients with stage III and in another population-based study from Scandinavian countries between 1990 and 2016.

When considering colon tumors by location, the adoption of minimally invasive surgery did not differ between the right and left colon, while the application of robotic surgery was significantly higher for tumors in the left colon.

Follow-up for the diagnosis of recurrence or metastatic disease has also improved significantly thanks to new biomarkers, which have high sensitivity and specificity for the diagnosis of neoplasia and allow for more accurate long-term assessment.

Finally, they conclude that the increased use of chemotherapy drugs, immunotherapy and the advancement of minimally invasive surgery have led to an improvement in the outcome of patients, especially in those with advanced disease. The authors consider that a personalized approach to the treatment of colon cancer should be promoted.

Survival

According to Japanese guidelines, the 5-year OS of colon cancer after curative resection for stages p0-IV is

72.8%. Survival according to stage is: I: 92.3%, II: 85.4%, IIIA: 80.4%, IIIB: 63.8% and IV: 19.9%.

The 5-year OS according to tumor location is 68.2% for the cecum, 71.4% for the ascending colon, 74% for the transverse colon, 75.4% for the descending colon, and 73.7% for the sigmoid colon.

Follow-up

The recommended follow-up protocol includes:

- Up to 3 years after surgery:
- Clinical examination and CEA every 3 to 6 months.
- CT scan of the chest and abdomen every 6 to 12 months.
- Colonoscopy every 3 to 5 years starting the first year after surgery.
- From 3 to 5 years after surgery:
- Clinical examination and CEA every 6 to 12 months
- CT scan of the chest and abdomen every 12 months
- Colonoscopy every 3 to 5 years if there are no findings • After 5 years: evaluate to end follow-up, except:
- Colonoscopy every 5 years until 75 years of age or individualized according to life expectancy.

Recurrence

The diagnosis and treatment of locoregional recurrence of colon cancer are beyond the scope and objectives of this report. Given the importance of the topic, it is suggested that it be included in a future report.

REFERENCES

- Horesh N, Emile SH, Garoufalia Z, et al. Trends in management and outcomes of colon cancer in the United States over 15 years: Analysis of the National Cancer Database. *Int J Cancer*. 2024;155:139–48.
- Kim CW, Kim CH, Baik SH. Outcomes of robotic-assisted colorectal surgery compared with laparoscopic and open surgery: a systematic review. *J Gastrointest Surg*. 2014;18:816–30.
 Schwenk W, Haase O, Neudecker J, et al. Short term benefits for
- Schwenk W, Haase O, Neudecker J, et al. Short term benefits for laparoscopic colorectal resection. *Cochrane Database Syst Rev.* 2005;2005:CD003145.
- van Steenbergen LN, Elferink MAG, Krijnen P, et al. Improved survival of colon cancer due to improved treatment and detection: a nationwide population-based study in The Netherlands 1989-2006. Ann Oncol. 2010;21:2206–12.
- Lundberg FE, Andersson TM-L, Lambe M, et al. Trends in cancer survival in the Nordic countries 1990-2016: the NORDCAN survival studies. Acta Oncol. 2020;59:1266–74.
- Hashiguchi Y, Muro K, Saito Y, et al. Japanese Society for Cancer of the Colon and Rectum (JSCCR) guidelines 2019 for the treatment of colorectal cancer. Int J Clin Oncol. 2020;25:1–42.