Total colectomy with D3 lymph node dissection for IBD-associated colorectal cancer is safe and oncologically effective: case match study

Yury Kitsenko, Inna Tulina, Petr Tsarkov

I.M. Sechenov First Moscow State Medical University
Clinic of Colorectal and Minimally Invasive Surgery

Background

Patients with inflammatory bowel disease (IBD) have a significantly higher risk of developing colorectal cancer (CRC). Still principles of treatment of IBD-associated CRC (IBD-CRC) are not clearly established. The necessity of total proctocolectomy in patients with ulcerative colitis and CRC is mentioned in many international guidelines. But the necessary volume of lymph node dissection (LND) is not set up.

Aim

To compare the results of radical surgery with extended LND in IBD-CRC and sporadic colorectal cancer (spCRC) patients and to find out the place of extedned LND in IBD-CRC.

Materials and Methods

From prospectively collected database the patients with colorectal adenocarcinoma stages I-III who underwent elective surgery with extended D3 LND were chosen and divided into two groups.
First group (IBD-CRC): patients with ulcerative colitis or Crohn's disease and colorectal cancer (IBD-associated CRC).
Second group (spCRC): patients with sporadic colorectal cancer.

Patients from IBD-CRC and spCRC groups were matched in 1:3 ratio using the following criteria:
1. pathological stage
2. tumour location (left colon, right colon, rectum).
The evaluation of short- and long-term results of treatment, as well as the results of pathomorphological examination of specimen, was carried out.

Results

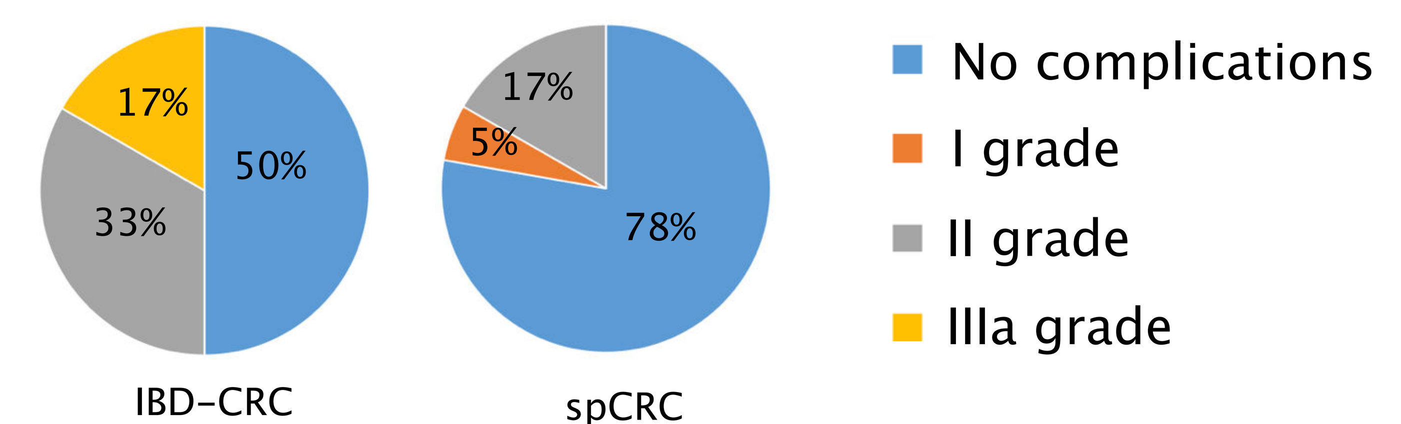
Short-term results

	IBD-CRC	spCRC	p
Patient number	6	18	-
Operation time, min	313.3±89.6	240.0±68.2	**0.05**
Blood loss, ml	383.3±354.5	186.1±123.4	0.24
Hospital stay, days	15.7±7.9	14.1±3.9	0.5
Complication number, n	3	4	0.2
Postop. treatment in ICU, days	2.3±1.6	1.17±0.7	**0.02**
Bowel peristalsis restoration, days	2.0±0.9	1.3±0.5	**0.02**
Time to first gas, days	2.5±1.4	2.1±0.6	0.5
Time to first stool, days	4.2±3.4	2.4±0.7	0.3
Postop. IV infusions, days	9.3±5.6	7.1±2.2	0.37

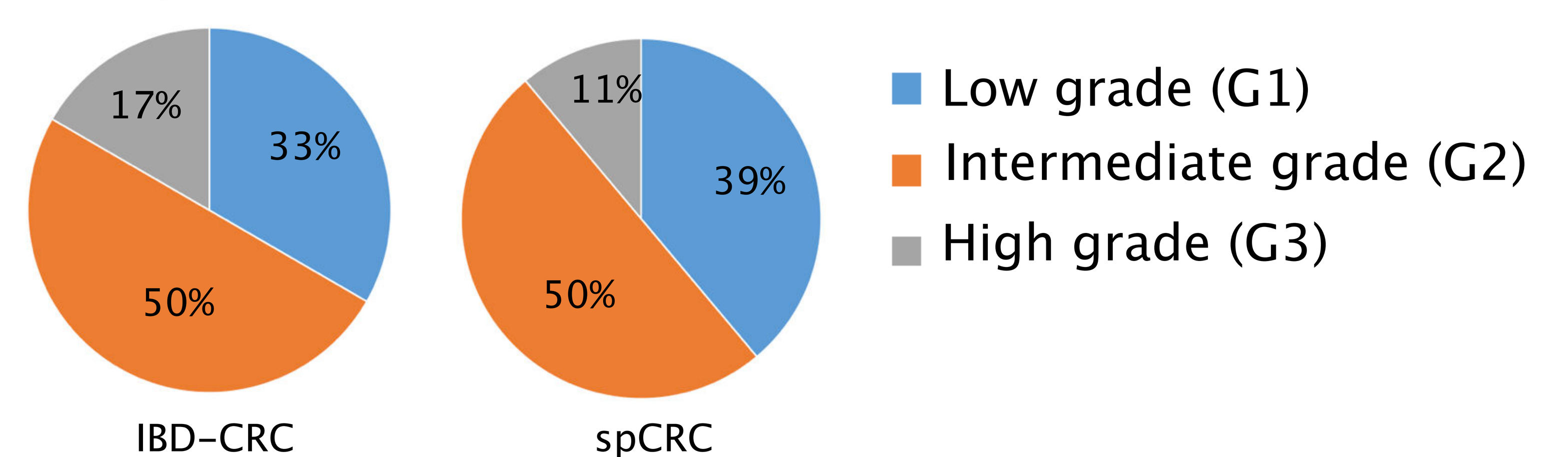
IBD-CRC patients had longer operation time, but mean blood loss and postoperative days didn't differ. IBD-CRC patients spent longer time in ICU than spCRC and had later bowel peristalsis restoration, however, time to first gas and stool via stoma didn't differ.

There is an inverse correlation between the duration of IV infusion and the restoration of peristalsis (r=0,6; p<0,01).

Early complications by Clavien-Dindo classification



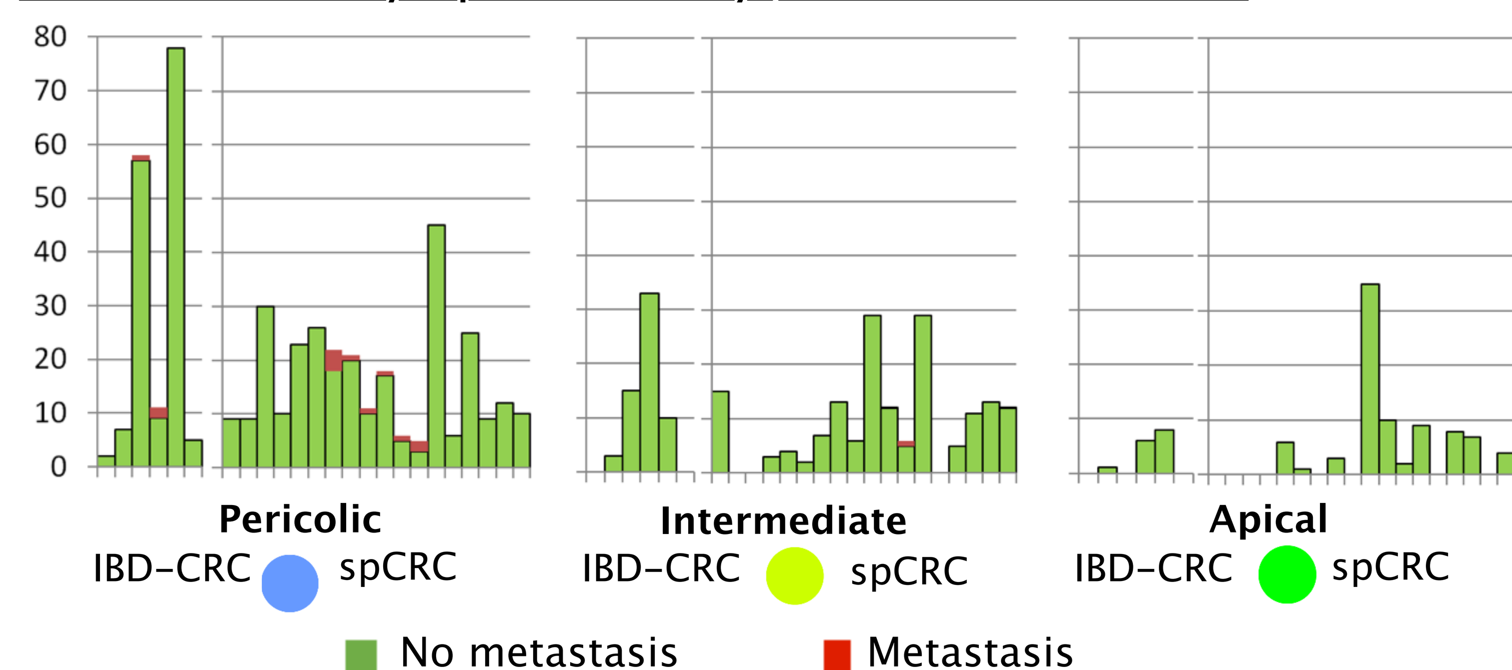
Grading of adenocarcinoma



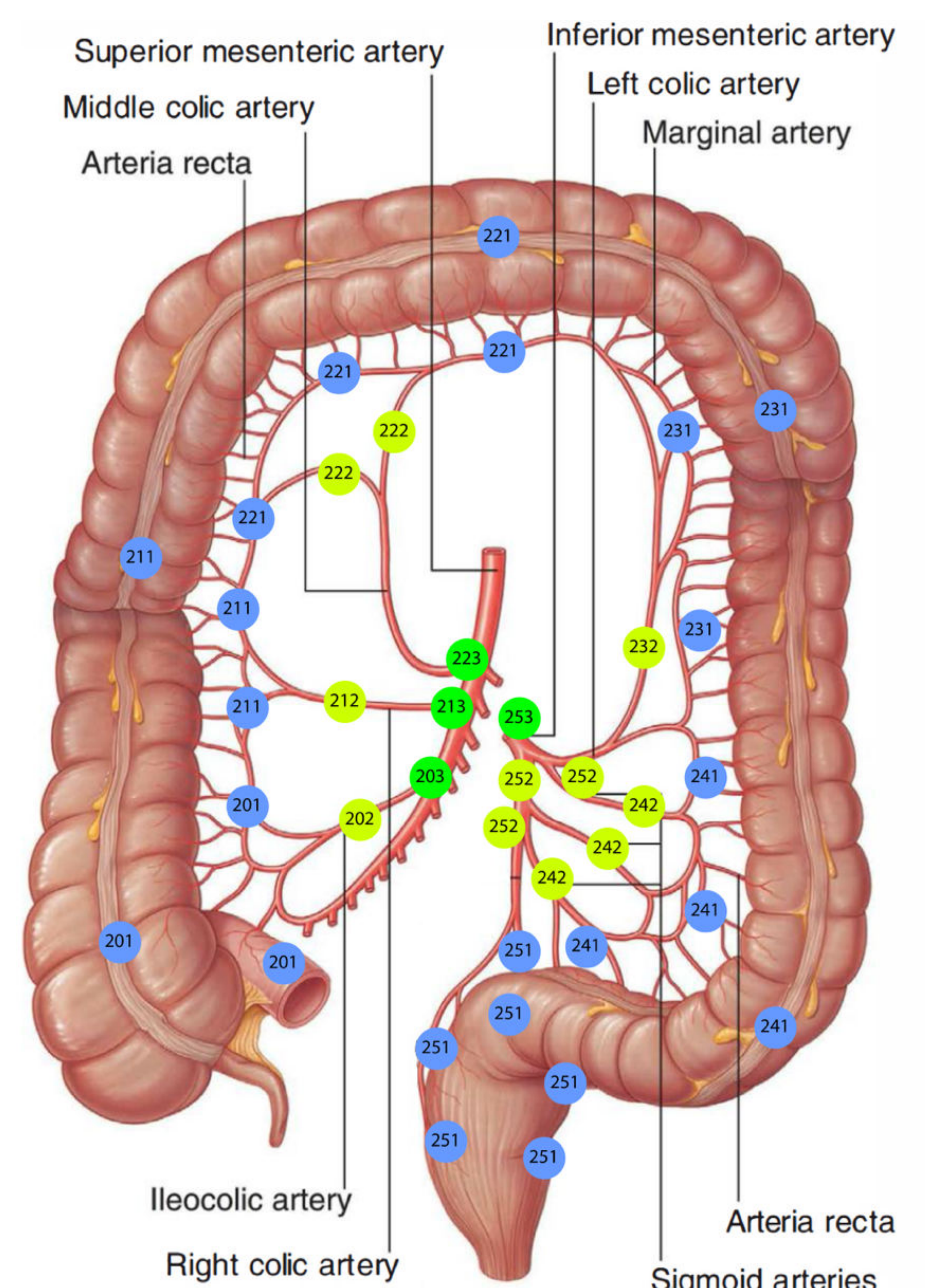
Pathomorphological results

The average number of lymph nodes examined was 39.0±16.0 (IBD-CRC) and 29.9±5.0 (spCRC) (p=0.6).
Metastases in pericolic lymph nodes: 33.3% in both groups, the average number of metastatic lymph nodes is 1.5±0.5 and 1.7±0.5 (p=0.8); intermediate: 6% metastasis in the spCRC group; apical lymph nodes were not affected in both group.

Metastases in lymph nodes by JSCCR classification[1]



1. Japanese Society for Cancer of the Colon and Rectum



Long-term results

The mean follow-up period was 27.3±25.9 months.
Distant metastases developed in 33.3% and 16.7% (p=0.4) in IBD-CRC and spCRC groups at 32.5±27.5 and 3.7±1.5 months respectively (p=0.35). No local recurrence revealed in both groups.
The overall mortality rate was 4.2%.

Conclusion

Tumour and LN characteristics in spCRC and IBD-CRC are similar, therefore radical surgery with extended LND is defensible for IBD-CRC patients.

www.proctocentr.ru info@kkmx.ru Russia, Moscow, Pogodinskaya, 1b1