

## SURGICAL TREATMENT FOR POLYPOID CARCINOMA OF THE COLORECTUM IN THE UNIVERSITY HOSPITAL FOR TUMORS, ZAGREB, CROATIA

MIROSLAV LESAR, STJEPAN JUZBAŠIĆ, MLADEN STANEC,  
DANKO VELIMIR VRDOLJAK and TOMISLAV OREŠIĆ

University Hospital for Tumors, Zagreb, Croatia

### Summary

Treatment of polypoid carcinoma raises the problem of invasiveness to be solved by a competent pathologist. Upon diagnosis of the invasiveness, a radical surgical procedure (resection of the colorectum) is indicated. A problem that occurs is a problem of adequate resection margins, or marking the primary tumor bed (1, 2). In the colorectal resection segment, an ulcer may persist in the area of polypectomy, although without pathohistological signs of malignancy.

In 7 patients treated in the University Hospital for Tumors, Zagreb, Croatia, discrete ulcer niches were verified in resection segments of the colorectum. In none of the patients, pathohistological signs of the primary tumor were found. In 3/7 patients malignant cells in the regional lymph nodes were verified. A year after the surgery, metastatic transformations of the liver were found in 1/7 patients.

KEY WORDS: *polyp of the rectum, polypoid carcinoma of the rectum*

### KIRURŠKO LIJEČENJE POLIPOIDNIH KARCINOMA KOLOREKTUMA U KLINICI ZA TUMORE

#### Sažetak

U liječenju polipoidnih karcinoma postavlja se problem invazivnosti, koji razrješuje ovlašteni patolog. Po dijagnosticiranju invazivnosti indicira se radikalni kirurški zahvat (resekcija pripadajućeg kolorektuma). Tu nastaje problem resekcije adekvatnog segmenta kolorektuma, odnosno markiranja ležišta primarnog tumora (1,2). U reseciranom segmentu kolorektuma može perzistirati ulkus u području polipektomije, ali bez patohistološki tragova maligniteta.

U 7 bolesnika liječenih u klinici za tumore verificirane su diskretne ulkusne niše u reseciranim segmentima kolorektuma. Ni u jednog bolesnika nisu nađeni patohistološki tragovi primarnog tumora. U 3 od 7 bolesnica verificirane su maligne stanice u regionalnim limfnim čvorovima. U 1 od 7 bolesnika godinu dana po operaciji su verificirane jetrene metapromjene.

KLJUČNE RIJEČI: *polip rektuma, polipoidni karcinom rektuma*

### INTRODUCTION

Colorectal polyps are defined as tumoroid lesions projecting to the colon lumen. Neoplastic polyp adenomas have a significant neoplastic potential. Based on their histological picture, adenomas are divided into 3 subtypes:

#### a) Tubular

- accounting for 75% of all adenomas
- found anywhere in the colon
- less than 5% of tubular adenomas show malignant alterations

#### b) Tubulovillous

- accounting for 15% of all adenomas
- comparably present in all colonic segments
- 20% of tubulovillous adenomas show malignant alterations

#### c) Villous

- accounting for 10% of all adenomas
- usually located in the rectum
- 30–40% of villous adenomas show malignant alterations

The diagnosis is established by irrigographic and endoscopic examination of the colorectum. The general therapeutic principle in the treatment for colorectal polyps is removal for:

1. All adenomatous polyps larger than 1 cm
2. All adenomatous polyps manifesting complications
3. Villous adenomas

The method of choice in the treatment is endoscopic polypectomy, or colotomy in case polypectomy cannot be performed. Polypectomy is followed by pathohistological analysis of the sample preparation (1, 3, 4). Further surgical management depends on the results of surgical analysis.

Considering their morphological appearance, the carcinomas are divided as follows:

1. Pendunculated carcinomas
  - Grade 0 – malignant transformations reach the muscularis mucosa
  - Grade 1 – invasion of the muscularis mucosa, but confined to the polyp head
  - Grade 2 – invasion of the muscularis mucosa into the area of the polyp stalk
  - Grade 3 – invasion of the muscularis mucosa into the area of the polyp base
  - Grade 4 – invasion of the submucosa and muscularis propria
2. Sessile polyps with an invasive component (involvement of the muscularis mucosa classified as grade 4).

In 9% of the cases, polyps containing invasive carcinoma metastasize into the regional lymph nodes and in these cases, polypectomy as definitive surgical procedure will not suffice (2, 5, 6). Therefore, polypoid carcinomas:

- a. Grade 3 and 4 pedunculated carcinomas
- b. Sessile polyps with an invasive malignant component
- c. Recurrent villous adenomas.

after polypectomy also require a radical surgery.

## MATERIAL AND METHODS

Postoperative data of 7 patients with a confirmed infiltrative process after radical endoscopic polypectomy were analyzed. The same diagnostic procedure was followed by a radical

surgical procedure (resection of the pertinent colorectal segment with the mesocolon).

Following macroscopic examination, discrete ulcer niches (at the primary tumor site) were verified in all 7 patients. Microscopic examination of the same area did not show any pathohistological signs of a malignant process.

In 3 patients, positive lymph nodes were verified.

In 4 patients, neither traces of the primary tumor nor tumor cells in the resected lymph nodes were found. In one of the four patients, secondary liver changes were verified a year after the operation.

It should be pointed out that elements of the primary tumor in the resected colorectum were not verified in any of the studied patients.

## DISCUSSION

Pathohistological evaluation of sample preparations after the radical surgical procedure did not show the primary tumor in any of the studied patients. A dilemma occurs whether the adequate segment of the colon was resected in the first act, and whether the radical resection in the absence of primary tumor finding would be necessary at all.

The performance of a radical surgical procedure requires primary tumor localization which is often impossible as the polypectomy site does not show after endoscopic polypectomy. Therefore, it imposes the necessity of marking the area as follows: 1. according to the anatomical relationships (rectal valves), 2. precise endoscopic measuring of the distance from the anocutaneous line, 3. methylene blue staining, 4. placing metal clips for tumors located in the lower region.

In 91% of the cases, tumor traces are found neither in the resected colon nor in the regional lymph nodes. Accordingly, if the preparation is not adequately marked, the question will be whether the adequate segment of the colorectum is resected.

In addition, justification for the surgical procedure can be found in the fact that in no less than 4 of the 7 patients, the presence of malignant cells in the regional lymph nodes, or distant metastases were verified. Parallely, no traces of

the primary tumor were found in any of the 7 studied patients (2, 7, 8).

## CONCLUSION

Following the evaluation of invasiveness of polypoid carcinoma of the colorectum, a radical surgical procedure with prior marking of the primary tumor site should be indicated.

After the resection, the resection preparation should be examined in detail and primary tumor location identified in order to determine adequate segmental resection of the colon.

## REFERENCES

1. Roth A. Probavni sustav. In: Turić M et al. Klinička onkologija 1996; 10: 347-67.
2. Štulhofer M, Repše S. Kirurgija debelog crijeva. In: Štulhofer et al. Kirurgija probavnog sustava, Tiskara »Zagreb» 1992.
3. Munoz Gr, Monzano Aonso ML. Approach to a colorectal polyp. Rev Esp Enferm Dig 2003; 95(9): 640-9.
4. Jass JR. Pathogenesis of colorectal cancer. Surg Clin North Am 2002; 82(5): 891-904.
5. Morimoto LM., Newcomb PA., Ulrich CM. Risk factors for hyperplastic and adenomatous polyps: evidence for malignant potential? Cancer Epidemiol Biomarkers Prev 2002;11(10 Pt 1):1012-8.
6. Radović S. Colorectal polyps. Med Arh 2002; 56(1 Suppl 1): 51-4.
7. Nakama H., Fukazawa K. Colorectal cancer risk in first-degree relatives of patients with colorectal adenomatous polyp. Hepatogastroenterology 2002; 49(43):157-9.
8. Khan A., Shrier J. The changed histologic paradigm of colorectal polyps. Surg Endosc 2002;16(3):436-40.

*Received for publication: October 21, 2003*

*Author's address: Miroslav Lesar, M.D., University Hospital for Tumors, Ilica 197, 10000 Zagreb, Croatia*