

Endoscopic Segmental Piecemeal Tumorectomy for Nodular Elevation of Colorectal Tumor: Applicability and Patient's Quality of Life

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Endoscopic segmental piecemeal tumorectomy (ESPT) for nodular elevation of colorectal tumor is advantageous in terms of minimizing both surgical invasion and postoperative burden to the patients. Nodular elevation of colorectal tumors is said to occur when the body of the tumor is adenomatous and the surface of the focal cancer grows more horizontally into the lumen than vertically. We report here four cases of nodular elevation of colorectal tumors which were each treated by different surgical procedures.

Key words: nodular elevation, colorectal tumors, endoscopic segmental piecemeal tumorectomy

Intense interest has been generated among gastroenterologists in Japan on the subject of nodular elevation of colorectal tumor, and the following classifications have been proposed: (a) colorectal flat elevation, (b) nodule-aggregating lesions of the colorectum, and (c) colorectal carpet-like tumors. The current consensus regarding its histogenesis is that the body of nodular elevation is adenomatous with or without focal carcinoma on the surface (1-3). We experienced four cases which were clinically confirmed as nodular elevation of colorectal tumors by endoscopy, barium enema and histopathology. We herein present our experience with four patients with nodular elevation of colorectal tumor, and the rationale used to select the surgical procedure.

Case Presentation and Discussion

Four patients (mean age: 68.5 years) developed colorectal tumors. Their sex, age, symptom, tumor location, tumor size, histological type, existence of focal cancer and treatment are given in Table 1.

The tumors were clinically confirmed as nodular elevation by endoscopy, barium enema, and histopathology. Fig. 1 shows the images of nodular elevation of colon tumor (Case 4): barium enema, endoscopic picture, macroscopic appearance and photomicrograph. The postoperative recovery was uneventful in all patients.

One out of four cases (25.0%) was malignant which was treated by a low anterior resection (LAR). However, this case showed cancerous foci only in the mucosal layer. Therefore, in retrospect this LAR was thought to have been too radical. Wedge resection may have been adequate although laparotomy appeared to be necessary. Of the above two methods, the mucosectomy involves less surgical injury. Endoscopic segmental piecemeal tumorectomy (ESPT) was most advantageous in terms of the minimal degree of invasiveness and the clinical course: non-drainage, early mobility and short hospitalization.

The detection rate of focal cancer has been reported to be approximately 50% in nodular elevation of colorectal tumors (1, 2). If cancerous foci are confined to the mucosal layer (*i.e.*, do not invade the submucosal layer), ESPT should be the first choice even for tumors as large as 5-8 cm in diameter. The minimal invasiveness of ESPT surgery and patient's quality of life provide further

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Table I Nodular elevation of colorectal tumors

No	Sex	Age	Location	Symptom	Size(mm)	Histological type	FC	Treatment
1	M	60	R	Diarrhea	85×80	Tubulo-villous ad	+	LAR
2	F	59	A	OBT(+)	40×25	Tubulo-villous ad	—	Wedge resection
3	M	77	R	OBT(+)	45×35	Tubulo-villous ad	—	Mucosectomy
4	F	74	T	OBT(+)	44×30	Tubulo-villous ad	—	Segmental PT by endoscope

R: rectum, A: ascending colon, T: transverse colon, OBT: occult blood test, ad: adenoma, FC: focal cancer, LAR: low anterior resection, PT: piecemeal tumorectomy

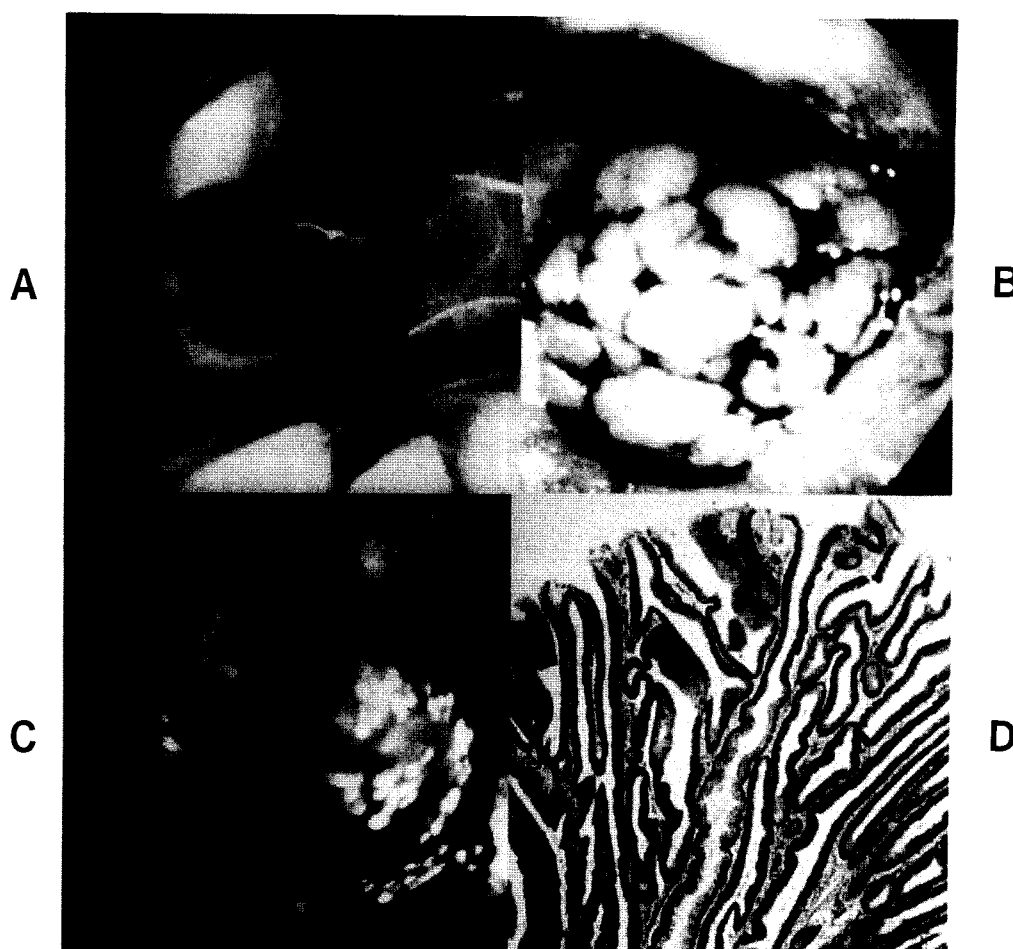


Fig. 1 Images of nodular elevation of colorectal tumors; **A**: barium enema, **B**: endoscopic picture, **C**: macroscopic appearance and **D**: microscopic photograph.

support for this procedure.

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