Preoperative Bariatric Surgery for Oncologic Disease in Severely Obese Patients

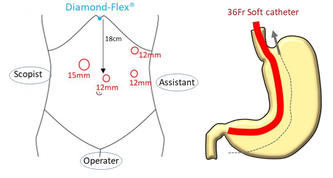
Ken Kojo[1], Motohiro Chuman[2], Kazuko Yokota[1], Keigo Yokoi[1], Toshimichi Tanaka[1], Hirohisa Miura[1], Takahiro Yamanashi[1], Takeo Sato[3], Naoki Hiki[2], Takeshi Naitoh[1],

1 Department of Lower Gastrointestinal Surgery, Kitasato University School of Medicine, Kanagawa, Japan
2 Department of Upper Gastrointestinal Surgery, Kitasato University School of Medicine , Kanagawa, Japan
3 Research and Development Center for Medical Education Department of Clinical Skills Education, Kitasato University School of Medicine , Kanagawa, Japan

Abstract

Background: Surgery for patients with severe obesity is technically challenging. Preoperative weight loss is expected to improve short-term outcomes.
Objectives: To evaluate the short-term outcomes of bariatric surgery followed by tumor resection in patients with severe obesity.
Methods: We report the short-term results of two cases: a case in which radical resection was performed after laparoscopic sleeve gastrectomy (LSG) for a large gluteal lipoma that had prolapsed into the pelvis, and a case in which LSG was performed after preoperative chemoradiation therapy (CRT) for advanced rectal cancer, followed by radical surgery.
Case 1: Female, 40s. Height was 162 cm, weight was 110 kg, and BMI was 41.9 kg/m2. MRI showed a size of 23 × 15 × 13 cm gluteal lipoma that prolapsed into the pelvis and compressed the rectum. LSG was performed to reduce preoperative weight and lipoma volume. 39 weeks after LSG, the patient weight was 82.4 kg and BMI was 31.4 kg/m2. The tumor had shrunk by 10% and was resectable percutaneously. No postoperative complications were observed. Postoperatively, defecation disorder improved.
Case 2: Male, 30s. Height was 159.4 cm, weight was 150.3 kg, and BMI 59.2 kg/m2. He was diagnosed with lower advanced rectal cancer (cT4b, cN2a, cM0, cStage IIIb). Preoperative CRT was performed for rectal cancer, and LSG was performed 2 weeks after CRT. 8 weeks after surgery, multiple liver metastases were detected and the patient received neoadjuvant chemotherapy (NAC). 26 weeks after LSG, the robot-assisted abdominoperineal rectal amputation (RALS-APR) and simultaneous urethral resection were performed for rectal cancer. At the time of surgery, the weight was 95.2 kg and BMI was 37.6 kg/m2. Postoperatively, the patient had an intra-abdominal abscess of Clavien-Dindo grade 2. 38 weeks after LSG, the patient underwent laparoscopic partial hepatectomy for liver metastasis. At the time of surgery, the weight was 82.2 kg and BMI was 32.4kg/m2. There were no postoperative complications. The patient is currently under observation with no recurrence.
Conclusion: Bariatric surgery prior to radical surgery for oncologic diseases may be useful for patients with severe obesity.

Laparoscopic sleeve gastrectomy

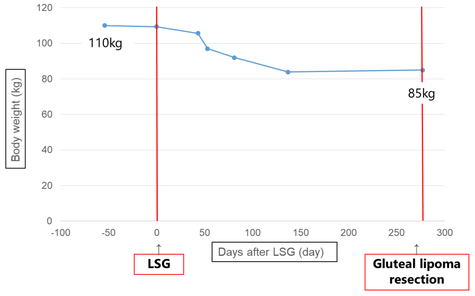


Case 1: Large gluteal lipoma

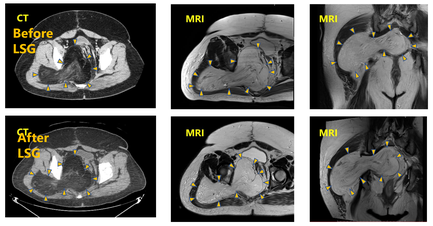
40s, female
163 cm, 110 kg, BMI 44.1 kg/m²

Medical history: She had been suffering from urinary and fecal incontinence, and numbness from the pubic region to the right buttock. for several months. CT/MRI revealed a large lipoma protruding into the pelvis.
Past medical history: uterine myoma, sleep apnea, depression, diabetes mellitus
Progress: Initially, it was considered that tumor might be removed by a transabdominal approach. However, because of concerns about the difficulty of manipulation during surgery due to the high degree of obesity and incarcerated huge lipoma, a bariatric surgery was planned.

Changes of Body weight

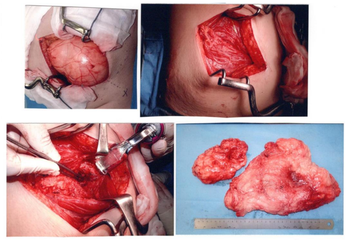


CT/ MRI



The tumor shrank by 10% while weight decreased by 20%.

Radical surgery



The subcutaneous fat in the buttocks was significantly reduced and the tumor could be resected percutaneously.

Case 2: Advanced lower rectal cancer

30s, Male
159.4 cm, 150.3 kg, BMI 59.2 kg/m²

Medical history: The patient had bleeding and pus during defecation for 3 months, and tumor lesion was suspected during proctoscopic examination. Endoscopic and imaging examination revealed lower advanced rectal cancer. Since the patient was severely obese and had sleep apnea syndrome (SAS), he was referred to our hospital for weight loss surgery and treatment of rectal cancer.
Past medical history: SAS, Depression,
Progress: He was diagnosed with lower advanced rectal cancer (cT4b, cN2a, cM0, cStage IIIb). Since it was expected that radical surgery for advanced rectal cancer would be difficult due to high obesity, the plan was to perform chemoradiotherapy (CRT) first, followed by bariatric surgery during the waiting period of CRT before radical surgery.

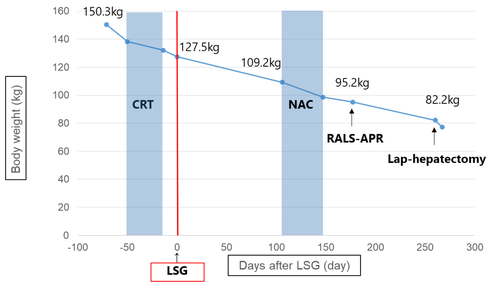
Course of treatment

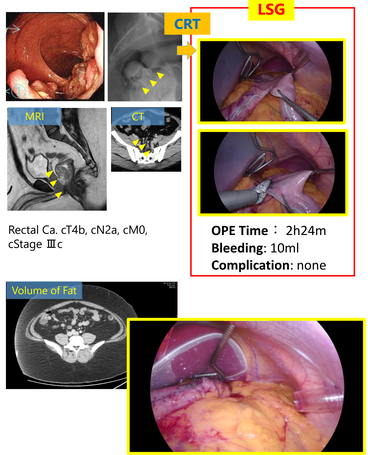
50-14 days before LSG : **CRT** for Rectal Ca

Laproscopic sleeve gastrectomy

60 days after LSG : Multiple liver metastasis
106 -147 days after LSG : **NAC** (XELOX+Bv) for Rectal Ca. and Liver metastasis
177 days after LSG : **RALS-APR, D3 lymph node resection**
260 days after LSG : **Lap-hepatectomy**（S4＋2, S6, S7, S8）

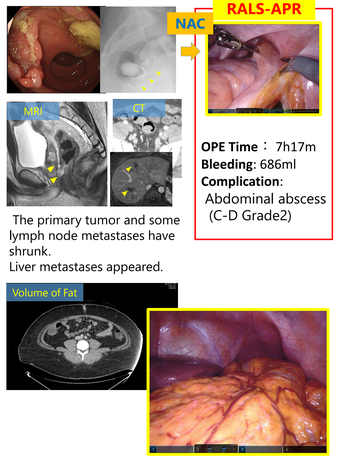
Changes of Body weight





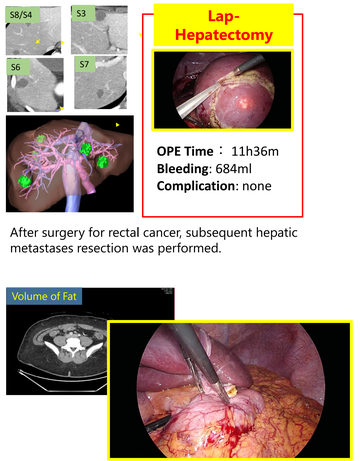
Rectal Ca. cT4b, cN2a, cM0, cStage Ⅲc

OPE Time： 2h24m
Bleeding: 10ml
Complication: none



The primary tumor and some lymph node metastases have shrunk.
Liver metastases appeared.

OPE Time： 7h17m
Bleeding: 686ml
Complication: Abdominal abscess (C-D Grade2)



After surgery for rectal cancer, subsequent hepatic metastases resection was performed.

OPE Time： 11h36m
Bleeding: 684ml
Complication: none

Conclusion

Although careful attention should be paid to tumor progression when bariatric surgery is performed prior to resection of oncologic disease, radical surgery could be safely performed with marked reduction in visceral fat.

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