

Survival and Quality of Life after Sacrectomy for Recurrent Colorectal Cancer

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Background: Recurrent and locally advanced colorectal cancers present a complex clinical situation requiring multidisciplinary team approach and radical extended surgery. Sacrectomy is necessary for posteriorly invaded tumors, but are associated with high morbidity and mortality. Little data exist on survival, functional outcome and quality of life (QoL) following sacrectomy in colorectal cancer patients.

Questions/Purposes:

The purpose of this study was to retrospectively analyze morbidity, survival and QoL after sacrectomy for locally advanced or recurrent colorectal cancer based on the level of resection.

Patients and Methods:

Records of all patients with locally advanced or recurrent colorectal cancer involving the sacrum who were treated with sacrectomy from 1992-2012 were retrospectively reviewed. Patient demographics, operative procedures, pathologic studies and prospective survival data were examined. Survival was analyzed using the Kaplan-Meier method. Outcomes included cancer-specific QoL was assessed using Patient Reported Outcome Measurement Information System (PROMIS) global physical and mental health; including pain, gastrointestinal symptoms, urinary incontinence and sexual function.

Results:

Forty patients underwent composite sacral resection for recurrent locoregional rectal cancer (23 female; median age, 53; range 23-80 years). Level of sacrectomy was defined by the sacral root preservation; S1 (3 cases), S2 (12 cases), S3 (12 cases), S4 & below (13 cases). Three patients (7%) had low anterior resection, 26 (65%) had abdominoperineal resection, 9 (23%) had pelvic exenteration and 2 (5%) had others. Resection was complete (R0) in 26 patients (65%), with microscopically positive margins in 7 patients (18%) and grossly positive margins (R2) in 7 patients (18%). Most common complications were deep infections/drainages in 13 cases (32%). At the mean follow-up of 36 months, 2- and 5-year local recurrence rates were 18% and 24%, and disease-specific survival (DSS) rates were 75% and 38%, respectively. The 4 patients (10%) who are still alive are free of disease after 10 years. Greater extent of sacral amputation and nerve root sacrifice correspond with worse PROMIS global physical and mental health T-scores (39.8 vs 42.3, $p=0.04$ and 41.1 vs 48.3, $p=0.02$).

Conclusions:

Sacrectomy in patients with invasive colorectal cancer is a high-risk procedure which can achieve negative resection margins and provide local disease control with acceptable morbidity and QoL. Although a majority of these patients will die of metastatic disease, long term survival may be possible.