LOCALLY RECURRENT RECTAL CANCER

Incidence and predictors of local recurrence

- Following curative resection, 4% - 18% of colonic carcinomas and 3% to 32% of rectal carcinomas are expected to recur locally (1).
- According to Shoup et al – 4% – 30% risk of developing a locoregional recurrence with 40% – 50 % of these cases occurring in the absence of distant disease.
- According to Lopez-Kostner et al – incidence of local recurrence after radical surgery for rectal cancer varies between 3 – 50%
- According to Kendal et al only 25% of the local recurrences can be resected with curative intent. 80% - 90% of those with local recurrence will die within 5 years.
    - According to Temple and Saettler local recurrence without clinical evidence of distant metastases, accounts for about half the cancer related deaths at 5 years.
- *Predictors of disease recurrence(6)*

  1. Lymph node involvement
  2. Full thickness penetration of the muscular wall of the rectum

Predictors of improved local control after resection and radiotherapy for recurrent rectal cancer according to Shoup et al (2)

1. Complete resection
2. Absence of vascular invasion

Study (prospective database) from Jan 1990 – June 2000 – 634 patients undergoing resection for recurrent rectal cancer. 111 of these patients received intra-operative radiotherapy with curative intent. 100 patients were available for follow-up (median of 23.2 months) – 60% patients had recurrence – 33% locally, 27% distantly and 13% at both sites. Out of all the variable analyzed only complete resection with microscopically negative margins and absence of vascular invasion in the recurrent specimen predicted improved disease-free and disease-specific survival

Surgical management of locally recurrent disease

Goals of treatment for locally recurrent rectal cancer(5)

- Palliation of symptoms
- Good quality of life
- Cure with low treatment – related complication rate

- Rectum recurrence > Colon (1)
- Thorough clinical and radiologic investigation
- Management of locally recurrent colorectal cancer depends on the site and extent of disease. Wound recurrences are rare but if isolated are amendable to local resection. Isolated anastomotic recurrences can be resected with median survivals from 37 – 59 months, but like wound recurrences they are often associated with disseminated disease.
- *Salvage Surgery*

  Study by Lopez-Kostner et al – reviewed records from 1980 – 1993. Out of 937 pts who underwent surgery with curative intent after proctectomy or transanal local excision 8.6% experienced local recurrence. Of 117 patients with locally recurrent rectal cancer- 43% underwent salvage surgery**.** 5 year cancer – specific and disease – free survival rates were 49.7 and 32.2 % respectively. A trend for poor prognosis was observed in patients with recurrence diameter > 3cm and tumor fixation.

- *Total Mesorectal Excision* Heald describes this as the "tumor package". He reports an anastamotic leak rate of 11%; a diverting stoma (ileostomy or transverse loop colostomy) has been advocated to prevent this complication. Without adjuvant radiation, he reports a local recurrence rate of 4% at 10 years in patients undergoing curative surgery for rectal cancer.
    - Enker et al in a series of 240 consecutive patients undergoing TME, report the rate of pelvic recurrence as 7.8% with a 74% 5 year survival rate.
- According to Wiggers et al the rate of local recurrence after treatment has decreased from 40% to 10% after the induction of TME. This is further reduced with the use of pre-operative radiotherapy.
- **Adjuvant Radiotherapy**
    - According to Frykholm et al the local recurrence rate was lower in the pre-operative irradiated group (13% vs 22%) and survival was superior by 10%.
    - According to Wayne et al – patients who have not had prior radiotherapy and are nonresectable, palliative treatment may be done. This will provide pain relief in 70% - 90% of patients with a median duration of response of about 3 months.
- **Intra-operative electron radiation**
- IOERT provides focal treatment of areas of tumor bed that are most prone to recurrence. Is an adjunct to sacropelvic resection
- An alternative to IOERT is preoperative low-dose-rate (LDR) brachytherapy. Flexible plastic catheters can be placed uniformly over the tumor bed, and postoperatively the catheters are loaded with 192 **Ir** sources to administer the prescribed dose.
- According to Temple and Saettler combining brachytherapy or IOERT with radical surgery appears to reduce the risk of local relapse and improve survival in cases in which complete excision is impossible or microscopically clear margins could not be obtained.

Chemotherapy

- In a study by Nakfoor et al the addition of chemotherapy to perioperative irradiation did not increase the frequency of sphincter-preserving procedures, pathologic downstaging or respectability rates for patients with locally advanced rectal cancer. Sphincter preserving procedures were performed in 29% of pts receiving chemo vs 27% not receiving chemo. T1. The rate of complete pathologic response was 8% in pts receiving chemoirradiation vs 8% in the other group. Complete resections were obtained in 80% of pts receiving chemoirradiation vs 71% of pts treated with irradiation alone. But there were statistically significant improvements in local control and disease specific survival rates in pts receiving 5-FU during external beam radiation

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