Management of Multi-visceral Rectal Cancer in the Integrative Model of Care as Envisioned in the U of M / MidMichigan Health Affiliation

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Disclosure:

• None
Outline:

• Challenges
• Data Multivisceral resection for rectal cancer
• Example Cases
• Affiliate and Integrate Care
• Maintaining and Certifying Quality
Unifying Goal:

• To improve the quality of care for our Colorectal Cancer patients in order for them to have the best outcome possible
Rectal Cancer

- Epicolic nodes
- Paracolic nodes
- Principal nodes
- Intermediate nodes
- Upper zone
- Middle zone
- Lower zone
- Internal iliac glands
Challenges in treating Rectal Cancer patients with advanced tumors:

- Highly complex patients
- We often meet patients late
- Keeping care local for patients
- Figuring out how to maintain and measure quality
- Center of Excellence Certification, American Cancer Society Commission on Cancer
Complex Patients

- Patients can be complex because:
  - A. Multivisceral involvement with tumor
    - Resectable
    - Not resectable
  - B. Comorbidities
  - Both A and B
- Multivisceral involvement can be due to the primary tumor or with concurrent metastasis to the liver
- Our group performs 2-4 of these Multi-visceral resections per month
Multi-visceral resection outcomes:

• Historically many of these patients were sent home to die
• Difficult to study as treatment is highly individualized
• Increased risk of recurrence (Crawshaw, 2014):
  Local recurrence: 8-20%
  – Distant metastasis: 10-30%
  – but many are cured
• Flap improves APR outcomes
  – Decreases wound complications (by 30+%)
Patient LN

- Present to MLTCR with symptoms of stool per vagina, bleeding per rectum, and weight loss, had been given palliative radiation and chemotherapy in UP, seen to discuss further chemo options:
- Age 67
- PMH: HTN
- Exam:
  - General: Thin but healthy, Abdomen: palpable mass; Pelvic: Tumor extruding from anus and vagina, urethra spared
- No signs of obstruction clinically or physically
- Previously told: No treatment options
Treatment Plan

• Chemotherapy (xeloda) plus radiation – done
• OR: En block resection of tumor including anus, perineum, rectum, mesorectum, pelvic sidewall, and posterior vagina; reconstruction with VRAM
• Chemotherapy
VRAM – Vertical Rectus Abdominis Myocutaneous Flap
Patient

- Resection of bladder, rectum, prostate, sacrum for locally recurrent rectal cancer
Multi-visceral resection for rectal cancer:

Requires:

– Appropriate work-up: MRI at diagnosis
– Appropriate Pre and post-operative therapy
– Post-operative care pathway
  • 6-10 day hospital stay, drain and ostomy teaching, Lovenox, PT
– Available experienced surgeons to work together for the resections:
  • HPB, Colorectal, Urology, Gynecology, Plastic Surgery, Spine
– Resectable tumor
What is unresectable?

• Carcinomatosis
• Bony involvement that is above S4
• Major vessel/nerve involvement
• High Pelvic Sidewall
• Multifocal Metastasis
Our Multi-visceral Team:

- Colorectal Surgeons
  - John Byrn, Samantha Hendren, Karin Hardiman, Arden Morris, Scott Regenbogen
- Urologic Oncologists:
  - Khaled Hafez, Jeff Montgomery, Cheryl Lee, Todd Morgan, Alon Weizer
- Gynecologic Oncologists:
  - Karen McLean, Carolyn Johnston, Kevin Reynolds
- Plastic Surgeons:
  - Jeff Kozlow, Bill Kuzon
- Hepatobiliary Surgeons:
  - Hari Nathan, Jim Knol
- Spine Surgeons:
  - Paul Park, Sybil Biermanm
- Medical Oncologists:
  - Grace Chen, John Krauss, Christine Veenstra
- Genetics
  - Elena Stoffel
- Radiation Oncology
  - Kyle Cuneo, Ted Lawrence
T4 Rectal Cancer

Local and Distant Staging: CT scan; MRI vs ERUS

Resectable

Localized

Neo-adjuvant therapy: c + c/xrt vs c/xrt

Obstructed

Divert

Multi-visceral surgery

Surveillance

Chemotherapy plus c/xrt

Not Resectable

Chemo/xrt/surgery with Palliative intent

Metastatic

Symptomatic primary

Asymptomatic primary

Multi-Visceral Surgery Team

Colorectal Surgery
Plastic Surgery
Urology
Gynecology
Hepatobiliary Surgery
Spine Surgery
What else can we offer?

Research studies

• Therapeutic:
  – Chemotherapy
  – Radiation
  – Surgery
    • Non-operative management (MSK National Trial)

• Non-therapeutic:
  – Intra-tumoral heterogeneity in Colorectal Cancer
  – Predictors of Complete Pathologic Response
  – cDNA markers
  – Sexual function in Partners after therapy
Intra-tumor Heterogeneity and Response to Therapy

Primary tumor before therapy

Primary tumor after therapy

C/xrt
Multi-visceral resections for Rectal Cancer:

- Goals of Affiliation are to address these Challenges
  - Highly complex patients
  - Keeping care local for patients
    - Partnering together to share care
  - Maintain and measure quality throughout plan of care
Affiliate and Integrate Care

- Affiliation leads to
  - Shared participation
  - Shared care = Partnership
  - Key is communication
  - Early integration for complex patients
- Bidirectional
Maintaining and Certifying Quality

• What defines quality care for colorectal cancer?
• Dashboard
  – Goals of dashboard for rectal cancer
• OSTRiCh Consortium/ACS CoC:
  – Will certify centers of excellence for rectal cancer
Dashboard

• Collaboratively designed
• Reflects agreed upon quality measures for colon and rectal cancer care
• Will allow us to measure and certify quality at both institutions for colorectal cancer care.
Dashboard – Surgical Metrics

• Preoperative staging
  – CT, CEA for colon, plus local staging/scope for rectal

• Rectal cancer surgical quality
  – Completeness of mesorectal dissection
  – Sphincter preservation when eligible

• Pathologic quality
  – Mesorectal grading
  – Lymph node yield

• Appropriate multimodal therapy
  – Chemo for stage 3 colon
  – ChemoRT for stage 2-3 rectal
Dashboard – Surgical Metrics

• Clinical registry data
  – Major postoperative morbidity
  – Complex SSI
  – Postoperative Length of stay
  – Unplanned readmissions
  – Total episode payments

• Complete staging
  – Colon 93%, Rectal 54% (further inquiry needed!)
• Lymph node yield >12
  – Colon 100%, Rectal 62% (but all <12 had preop radiation)
• Completeness of mesorectal excision – 100%
• Sphincter preservation – 100% of eligible pts
• Chemo for Stage 3 – 100%
• Radiation for Stage 2-3 rectal – 100%
• Postop median LOS: colon 3 days, rectal 6 days
• Readmissions: colon 14%, rectal 38%
Conclusion:

• Multi-visceral resection for advanced colorectal cancer
  – Requires team approach
  – Often requires coordination of care and pre-operative therapy
  – Improves patient outcomes
  – These patients will clearly benefit from our affiliation