Initiation of a Hyperthermic Intraperitoneal Chemotherapy Program at Aurora Health Care

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Background: The use of hyperthermic intraperitoneal chemotherapy (HIPEC) along with radical debulking has been the standard treatment for peritoneal-based malignancies, including appendiceal cancer (APPX), primary peritoneal cancer (PPC), peritoneal mesothelioma, and peritoneal spread from colorectal (CRC), gastric (GA), and gynecologic malignancies. At Aurora Health Care, a HIPEC program was initiated by our multidisciplinary gastrointestinal cancer group.

Purpose: To review the initiation and implementation of a HIPEC program started at Aurora.

Methods: Our protocol involves preoperative computed tomography scan, colonoscopy, upper endoscopy, and presentation at a multidisciplinary meeting. All patients received preoperative chemotherapy. All patients had diagnostic laparoscopy to determine resectability prior to debulking (same day). Laparotomy with complete debulking and resection of visually involved tissue was then performed. After temporary abdominal wall closure, HIPEC was performed for 90 minutes; chemotherapy was flushed and drained, and anastomoses were created. Patients were kept on chemotherapy precautions in the intensive care unit for a minimum of 48 hours.

Results: From October 2016 to June 2017, a total of 12 patients 28–76 years of age were referred for HIPEC; 10 patients had HIPEC (90 minutes at 42°C) utilizing mitomycin C (30 mg at time 0 and 10 mg at 60 minutes) after complete debulking of their tumor. Diagnoses included APPX (4), PPC (2), ovarian cancer (2) and CRC (2). Two patients did not undergo HIPEC due to extensive disease (GA and APPX). Of the 10 patients who had HIPEC, 9 had prior surgeries (mean: 1.8, range: 1–4). Peritoneal carcinomatosis index score ranged from 4 to 19. Resections included colon (7), spleen (3), diaphragm (3), small bowel (2), liver (2), stomach (1), gall bladder (1), pancreas (1), abdominal wall (1) and ovary (1). No patients had anastomotic leakage. Length of stay ranged from 7 to 54 days (mean: 15.8, median: 10). All patients had complete debulking; 3 received postoperative chemotherapy and 2 (APPX and CRC) have recurred. Postoperative complications have included prolonged ileus, recurrent small bowel obstruction, and intraabdominal abscesses. There were no mortalities.

Conclusion: Cytoreduction and HIPEC are feasible in a large community-based health system. Our results were favorable and, after our initial evaluation, we plan to continue our program and move forward with an institutional review board-approved study looking at tissue and blood levels of mitomycin C prior to, during, and after HIPEC.

Variability in Sentinel Lymph Node Biopsy Retrieval for Breast Cancer at Aurora Health Care

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Background: Axillary lymph node involvement has always been one of the most important factors in determining treatment and prognosis for breast cancer. Routine axillary lymph node dissection (ALND) was the standard treatment for breast cancer until the mid-1990s, when sentinel lymph node biopsy (SLNB) became the standard.

Purpose: We undertook an evaluation of the SLNB procedure, comparing dedicated breast surgeons (4) with general surgeons who also perform breast procedures (25) to see if there were any differences and to standardize the approach throughout Aurora Health Care.

Methods: We performed a retrospective chart review at Aurora to evaluate patients undergoing surgical treatment for breast cancer. The audit revealed that over a 6-month period from January 1, 2016, to June 30, 2016, 25 general surgeons and 4 dedicated breast surgeons performed 275 surgeries for primary operable breast cancer (stages I–III). There were 180 lumpectomies (LUMP) and 95 mastectomies (MAST) performed.

Results: In the 275 breast cancer operations, 253 (92%) SLNB procedures were attempted (163 LUMP, 90 MAST). For various reasons, 13 patients in the LUMP group and 10 patients in the MAST group did not undergo SLNB and were excluded from this analysis. Nomigration of contrast was noted in 6 patients (3 in LUMP group, 3 in MAST group); 4 of these subsequently had an ALND and 2 had no further axillary treatment. A mean of 2.26 and a median of 2.0 sentinel lymph nodes per patient were removed in the LUMP group. The full-time breast surgeons performed 112 SLNB operations (44%) (range: 22–43 operations/surgeon). The SLNB variability between groups showed the breast surgeons removed a mean of 2.37 nodes/patient for LUMP and 2.67 nodes/patient for MAST. The general surgeons removed a mean of 2.66 nodes/patient for LUMP and 3.28 nodes/patient for MAST.

Conclusion: The following recommendations were made within the hospital system: Dual tracer imaging should be used. One sentinel lymph node is insufficient for complete evaluation, and more than 4 nodes does not improve staging. Goal is to remove all sentinel lymph nodes that are hot, blue, or palpable, with a goal of 2 to 4 nodes per patient. A complete ALND can be safely omitted in stage I–III patients having LUMP with radiation when there are only 1 to 2 sentinel lymph nodes involved. In patients > 70 years of age who have a T1 or T2 estrogen receptor-positive tumor, SLNB can be safely omitted. SLNB after neoadjuvant therapy can be done even with an initially positive lymph node.

The Aurora Caregiver Wellness Program: Weight Loss and Health Insurance Claims Cost Reductions Among the Obese Population

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Background: Aurora Health Care’s caregiver wellness program provides incentives and resources to encourage weight loss for obese caregivers and spouses. Quantifying the benefits of these programs to the participants and to the organization was examined, including overall shift in body mass index (BMI) and change in health care claims costs for those who participated in the program.

Purpose: To understand the impact of an incentivized weight loss wellness program and the relationship between weight loss and caregiver health insurance claims costs.