



AMERICAN COLLEGE OF SURGEONS

SURGERY NEWS

Laparoscopic Resection Works Well for Diverticulitis

BY HEIDI SPLETE

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Laparoscopic sigmoid resection resulted in fewer complications, shorter hospital stays, and less pain than did open surgery in a study of 104 patients undergoing elective procedures for symptomatic diverticulitis.

Laparoscopic colon surgery has been performed routinely for more than a decade, but few studies have assessed its viability for elective sigmoid resections, said Dr. Miguel A. Cuesta of Free University Medical Center, Amsterdam. He and his colleagues randomized 52 patients to a standard open procedure and 52 patients to a laparoscopic procedure. The average age of the patients was 60 years. The demographics were similar between the two groups, and patients with acute diverticulitis were excluded from the study. Dr. Cuesta

presented the study results at an international colorectal disease symposium sponsored by the Cleveland Clinic Florida.

All patients received a standard bowel preparation. The laparoscopic resection involved a four- or five-cannula approach, depending on whether splenic flexure mobilization was needed.

Overall, the rate of major complications was significantly lower in the laparoscopy group than in the open surgery group (10% vs. 25%), while the rate of minor complications between the two groups was similar (37% vs. 39%). Major complications included postoperative hemorrhage, intra-abdominal abscesses, anastomotic leakage, and reoperations. Minor complications included pneumonia, wound infections, and urinary tract infections.

The average hospital stay was 8.5 days in the laparoscopy group versus 10.8 days in the open surgery

group, a significant difference. Similarly, pain scores based on the visual analog scale (VAS) during the first 4 days after surgery were significantly lower in the laparoscopy group than in the open surgery group. The average baseline VAS pain scores were approximately 3 for both groups. On postoperative day 1, the average score was slightly above 5 for the laparoscopy group and slightly above 6 for the open group, but by day 4 the scores were below 3 for the laparoscopy group and slightly above 4 for the open group. In addition, the average blood loss during surgery was 308 cc in the laparoscopy group versus 389 cc in the open surgery group.

Despite the longer average operating time in the laparoscopy group (192.5 minutes vs. 139.2 minutes in the open surgery group), the benefits appear to outweigh the longer operating time, he noted.

Dr. Cuesta had no financial conflicts to disclose. ■

Obesity Tied to Metastasis In Pancreatic Cancer

BY MARY ANN MOON

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Among patients who undergo pancreatic resection for adenocarcinoma, obesity appears to raise the risk for metastasis to regional lymph nodes, cancer recurrence, and mortality, according to a retrospective study.

These elevated risks are not related to unusually complicated or prolonged procedures stemming from the obesity itself. Rather, it appears that obesity is a host factor that increases the malignant potential of pancreatic tumors, wrote Dr. Jason B. Fleming, an ACS Fellow with the University of Texas M.D. Anderson Cancer Center, Houston, and his associates.

The investigators assessed the influence of body mass index on 35 cancer-related end points in 285 patients (161 males and 124 females, median age 63 years) who underwent pancreatic resection with curative intent in 1999-2006. The study subjects were followed for a median of 16 months after surgery.

A BMI of more than 35 was associated with a 16-fold increase in the risk of having lymph node metastasis, in part because obese patients were less likely than were others to undergo preoperative adjuvant therapy. The researchers noted that clinicians' concern about weight-related comorbidities may have influenced

their referrals for radiotherapy.

After the data were controlled for differences in preoperative therapy, obese patients remained at a 12-fold higher risk for regional metastasis compared with that of other patients. This association "is the strongest reported in the literature to date," Dr. Fleming and his colleagues said (*Arch. Surg.* 2009;144:216-21).

Obese patients also had an approximately twofold higher risk of cancer recurrence and a twofold higher risk of death than did patients with a BMI of less than 35.

The group with a BMI of more than 35 had the highest percentage of patients with advanced disease and the lowest percentage of patients with early disease. At final follow-up, 15 of 20 obese patients (75%) had died, compared with 137 of 265 patients (52%) with a BMI of less than 35.

Measures of surgical complexity were no worse in patients with increased BMI than in those of normal weight, and the obese patients did not have a more complicated or prolonged postoperative course compared with their nonobese counterparts.

"These data suggest that increasing BMI did not impair our ability to perform safe and oncologically sound pancreas resection in patients with adenocarcinoma," the investigators noted. ■

Two Mastectomy Approaches Check Breast Ca Recurrence

BY BRUCE JANCIN

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SAN ANTONIO — Skin-sparing mastectomy and standard mastectomy resulted in comparably low breast cancer recurrence rates in a large series from the University of Texas M.D. Anderson Cancer Center.

A total of 1,810 patients with stage 0-III primary breast cancer underwent mastectomy at the Houston cancer center in 2000-2005; surgeons performed a standard mastectomy in 60% of them and a skin-sparing one in 40%. At a median 51 months of follow-up in this retrospective nonrandomized study, 10% of women had experienced a local-regional or distant recurrence, Dr. Min Yi reported at the San Antonio Breast Cancer Symposium.

Recurrence rates were higher in the standard mastectomy group. (See box.) However, standard mastectomy recipients had a median age of 57 years compared with 49 years in women who got a skin-sparing mastectomy, and 60% had stage II or III disease, compared with only 28% of skin-sparing mastectomy recipients. Significantly more women in the standard mastectomy group had radiation therapy.

After statistical adjustment for differences in clinical tumor stage, there was no longer a signifi-

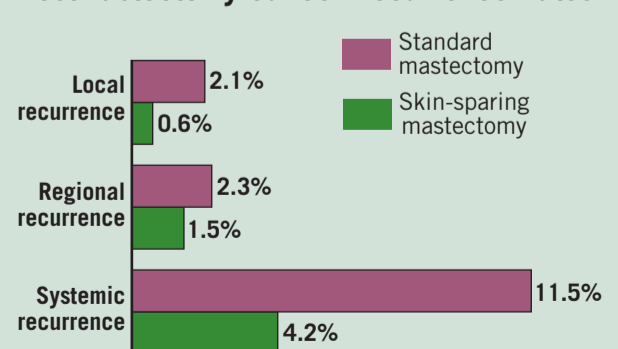
cant difference between the two groups in terms of disease-free survival, according to Dr. Yi.

In a separate presentation at the symposium, Dr. William C. Wood explained that skin-sparing mastectomy involves removal of the breast and nipple-areolar complex by a circumareolar incision.

"A skin-sparing mastectomy that preserves the skin envelope and allows the plastic surgeon to refill that envelope is a dramatically superior cosmetic procedure," said Dr. Wood, an ACS Fellow who is professor and chairman of the department of surgery at Emory University, Atlanta.

However, he added that for women at high genetic risk for breast cancer, it's important to explain that it's not 100% effective, and that they will lose all nipple sensation. ■

Postmastectomy Cancer Recurrence Rates



Note: These unadjusted rates were based on data for 1,810 patients.
Source: Dr. Yi



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SURGERY NEWS

Data Back Debulking for Advanced Ovarian Cancer

BY JANE SALODOF MACNEIL

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SAN ANTONIO — The controversial practice of performing extensive upper abdominal surgery on women with advanced ovarian cancer drew support from two large retrospective studies presented at the Society of Gynecologic Oncologists' annual meeting on women's cancer.

A review of 526 women with stage IIIC disease found that optimal cytoreduction prolonged progression-free survival, even when bulky disease was greater than 1 cm, reported Dr. Oliver Zivanovic of Memorial Sloan-Kettering Cancer Center (MSKCC), New York.

The second report, a review of complications in 141 women with advanced ovarian, tubal, and peritoneal cancers, who also underwent surgery at MSKCC, found major postoperative complications in 22% and 1.4% mortality within 30 days of surgery.

"With an overall median survival of 57 months in a cohort of patients with a large tumor burden, these rates of morbidity and mortality appear acceptable," said the presenter, Dr. Dennis S. Chi of MSKCC.

Both studies show that surgical skill improves the duration of survival, although surgery usually is not curative in advanced disease, Dr. Michael L. Berman, a discussant who is an ACS Fellow with the University of California, Irvine. "The biology of patients with large-

volume disease is probably different from the biology of those with small-volume disease," he said.

Dr. Zivanovic and his coauthors reviewed patients who underwent primary cytoreductive surgery followed by intravenous platinum-based chemotherapy from 1989 to 2006. The population was stratified into three groups based on presence and volume of upper abdominal disease (UAD) cephalad to the greater omentum at the start of surgery: no UAD, minimal UAD of 1 cm or less, and bulky UAD of greater than 1 cm.

Surgeons achieved optimal cytoreduction, defined as 1 cm or less of residual disease, in 107 of 128 (84%) women with no UAD, 110 of 166 (66%) women with minimal UAD, and 99 of 232 (43%) patients with bulky disease, investigators reported.

Optimal resection brought median progression-free survival to 19 months in women with bulky UAD vs. 13 months in those suboptimally resected disease ($P = .02$), Dr. Zivanovic said. In patients with minimal UAD, the median was 21 months with optimal resection vs. 12 months with suboptimal ($P = .0008$); in those with no UAD before surgery, the median reached 30 months with optimal resection vs. 14 months with suboptimal (P less than $.0001$).

Suboptimal resection did not significantly prolong survival when patients with no, minimal, and bulky disease before surgery were compared, but optimal resection had a significant benefit ($P = .001$).

"The benefit of optimal cytoreductive outcome decreases with increasing tumor volume, but appears to remain in the highest-risk patients with large-volume disease," Dr. Zivanovic said, adding that prospective data are needed to determine the impact of extensive UAD.

In 2001, Dr. Chi and his colleagues established a prospective database of all gynecologic surgical cases and subsequent complications. Their analysis focused on grade 3-5 complications in patients who underwent extensive UAD procedures from January 2001 to December 2006. The population studied had a median age of 60 years; 103 (73%) of 141 patients had stage IIIC disease; 122 (87%) had grade 3 tumors, 132 (94%) serous histology, and 118 (84%) ascites at presentation.

Most patients had more than one procedure, including diaphragm peritonectomy, splenectomy, full-thickness diaphragm resection, partial hepatectomy, distal pancreatectomy, cholecystectomy, and resection of porta hepatis tumor. After surgery, 42 patients (30%) had no gross residual disease, 85 (60%) had 1 cm or less of residual disease, and 10 (7%) had residual disease greater than 1 cm.

Dr. Chi reported that 41 patients (29%) had grade 3-5 complications, including 2 patients (1.4%) who died within 30 days of surgery. There were no grade 4 complications, and only five grade 3 complications required reoperation. ■

Withholding Some HT Meds May Cut Periop Hypotension

BY DAMIAN McNAMARA

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MIAMI BEACH — Patients taking most antihypertensive medications the morning of surgery are not at higher risk for hypotension or more vasopressor use during the perioperative period, according to a retrospective study. However, significantly more patients taking an angiotensin-converting enzyme inhibitor experienced these events, and there was a higher incidence among those taking an angiotensin-receptor blocker as well.

"We think they should withhold ACE inhibitors and angiotensin-receptor blockers [ARBs]" on the morning of surgery, Dr. Matthieu Touchette said in an interview.

Dr. Touchette and his colleagues compared 371 patients with a diagnosis of hypertension evaluated in the preoperative clinic within the department of medicine at the University of Sherbrooke Central Hospital in Quebec. All patients had elective surgery and a hospital length of stay longer than 1 day between November 2005 and November 2006. The researchers compared 91 patients who did not take their antihypertensive medication on the morning of surgery with 280 patients who did.

Their aim was to compare hypotensive episodes and use of vasopressors during the perioperative period between these groups. Results were presented in a poster at a meeting on perioperative medicine sponsored by the University of Miami.

Guidelines from the American College of Cardiology and the American Heart Association suggest withholding ACE inhibitors and ARBs on the morning of surgery (Circulation 2007;116:e418-99). "We wanted to check if all hypertensive medications make a difference—do they really change" the perioperative course? said Dr. Touchette, an internist at the University of Sherbrooke Central Hospital.

The mean age of the patients was 67 years in the medicine group (43% men) and 69 years in the no-medicine group (54% men). There was more hypertension during preoperative evaluation in the medicine group (91%) than in the no-medicine group (81%). A lower proportion of patients in the medicine group had cardiovascular disease (24% vs. 46%),

dyslipidemia (51% vs. 71%), and atrial fibrillation/flutter (7% vs. 21%).

The type of medication that patients were taking at the time of the preoperative clinical evaluation, not surprisingly, corresponded with these diagnoses. For example, more patients in the medicine group were taking diuretics (56% vs. 43%). In contrast, a higher proportion of patients who did not take hypertensives before surgery were on beta-blockers (54% vs. 23%), calcium channel blockers (48% vs. 25%), and nitroglycerin (9% vs. 2%).



ACE inhibitors and ARBs were associated with more perioperative hypotensive episodes.
DR. TOUCHETTE

"We found, and it's very interesting, that whether we give pills or not, many people have hypotension during surgery," Dr. Touchette said. Hypotension, defined as systolic blood pressure less than 90 mm Hg, occurred in 58% of the medicine group and 46% of the no-medicine group. "We were surprised how many of our patients have hypotensive episodes during surgery."

Despite a high incidence of perioperative hypotension, Dr. Touchette and his colleagues found no significant differ-

ence between groups. "There was no overall difference if we look at all the medications as one big bag," he said.

They also found no significant difference in perioperative use of vasopressors between those who took their antihypertensive the morning of surgery (71%) and those who did not (79%).

However, "when we looked at individual drugs, the ACE inhibitors and ARBs were associated with more hypotensive episodes in the perioperative period," Dr. Touchette said. Among the patients taking medication on the morning of surgery, there was a statistically significant increased association between perioperative hypotension or vasopressor use if they took an ACE inhibitor (adjusted odds ratio, 2.36), compared with those who did not take this type of medication. Similarly, patients taking an ARB just before surgery had an increased risk for these two factors, although it was not statistically different (adjusted OR, 2.38).

In contrast, there was a lower risk among patients taking a calcium channel blocker on the morning of surgery (adjusted OR, 0.73), a diuretic (OR, 0.83), or a beta-blocker (OR, 0.89).

Dr. Touchette said that in the future they "would like to try to reproduce the study in a prospective manner." ■