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ABSTRACTS

of presentations to the Annual Meetings of the

Canadian Society of Colon and Rectal Surgeons

Canadian Association of General Surgeons

Canadian Association of Thoracic Surgeons

RÉSUMÉS

des communications présentées aux congrès annuels de la

Société canadienne des chirurgiens du côlon et du rectum

Association canadienne des chirurgiens généraux

Association canadienne des chirurgiens thoraciques

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comes. Of 560 potentially relevant articles published between January 1988 and March 2007, 33 retrospective and prospective studies met our inclusion criteria: studies of adult patients with acute RLQ pain, comparison of abdominal CT scan with clinical evaluation alone, outcomes including negative appendectomy, perforation, and/or time from emergency department assessment to surgery.

Negative appendectomy rates were evaluated in 28/33 (85%) studies; 15 of these studies showed a significant decrease in negative appendectomy rates with the increased use of CT scans and the remaining studies showed no significant difference. Appendiceal perforation rates were evaluated in 14/33 (42%) of the studies. Only 3 studies demonstrated a significant increase in perforation rates with the increased use of CT scan. Time to the operating room (OR) was evaluated in 7/33 (21%) studies; 4 of these studies demonstrated a significant increase in the time to OR with the increased use of CT scans.

The use of abdominal CT scans in the evaluation of patients presenting with acute RLQ pain is associated with a significantly lower negative appendectomy rate. However, there is some evidence to suggest that CT scans are associated with higher appendiceal perforation rates and delays to surgery.

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Population-based interventions for pancreas cancer surgery likely contributed to improvements in rates of operative mortality: observational study in Ontario and Quebec for years 1994 to 2004. ***M. Simunovic, D. Major, F. Qui, T. To, N. Baxter, D. Urbach.*** **McMaster University, Hamilton, Ont., Institut national de santé publique du Québec, Québec, Que., Institute for Clinical Evaluative Sciences, Hospital for Sick Children, University of Toronto, Toronto, Ont.**

In Ontario, in the year 1999, 2 interventions related to pancreas cancer surgery were the production of a standards of care report, and the audit and feedback to surgeons of their results. Intervention goals included regionalizing care to hospitals with a high volume of procedures and lowering operative mortality rates. Similar interventions did not occur in Quebec. For pancreas cancer surgery in Ontario and Quebec we measured time trends in regionalization to high-volume hospitals and operative mortality rates by hospital procedure volume and overall.

We used Ontario and Quebec hospital administrative databases. For individual years we defined high-volume hospitals as performing > 10 pancreas resections annually (the definition of the Ontario standards of care report), and operative mortality as inhospital death. Prior to viewing results, we selected years 1994–1997 and 2001–2004 for assessment of operative mortality rates.

Over the years 1994 to 2004 there were 1895 and 1396 pancreas cancer resections in Ontario and Quebec, respectively. For Ontario and Quebec, respectively, in years 1994–1997 the percentage of patients treated in high-volume hospitals was 35% and 37%, while in years 2001–2004 the percentage rose to 65% and 68%. In Quebec for these same respective time periods, the rate of operative mortality in high-volume hospitals was 7.0% and 7.8%, in low-volume hospitals was 8.7% and 13.0% and for the province was 8.1% and 9.5%. In Ontario for these same respective time periods, the rate of operative mortality in high-volume hospitals was 11.1% and 3.8%, in low-volume hospitals was 9.2% and 7.0%, and for the province was 9.9% and 4.9%.

Regionalization to high-volume hospitals was similar in Quebec and Ontario. Operative mortality dropped in Ontario mostly due to improvements in results in high-volume centres, and rose slightly in Quebec mostly due to worsening results in low-volume centres. In Ontario, population-based interventions for pancreas cancer surgery in the year 1999 likely contributed to improved rates of operative mortality.

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Ulceration and depth of invasion: are there enough similarities with melanoma to incorporate these features into the staging of Merkel cell cancers? ***A. McGuire, R. George.*** **Departments of Surgery and Oncology, Queen's University, Kingston, Ont.**

Merkel cell cancer (MCC) is a rare form of cutaneous neuroendocrine neoplasm with only a few published series exceeding 12 cases. While associated with a poor prognosis, there is limited information on staging these cancers and no data on the prognostic significance of ulceration. (Ulceration is a known poor prognostic indicator in melanoma, which is of neuro-ectodermal origin).

This is a case control study comparing prognostic and etiologic features of melanoma and MCC. Comparisons include patient skin types, age, sun exposure and regional and systemic failure, prognostic significance of ulceration and depth of invasion. Statistical analysis included Student's t test, χ^2 and Fisher's exact test.

Final analysis included 232 melanoma and 14 MCC cases. Like melanoma, MCC was most common on sun exposed areas and in type I, II and III skin. The relationship with sun exposure was even stronger for the MCC cases than the melanomas ($p = 0.026$). Both showed a propensity for full thickness skin invasion (greater in MCC with $p = 0.0002$), and both had nodal and systemic failures. Like melanoma, in MCC ulceration of the primary was significantly associated with metastatic disease ($p = 0.03$). Depth of invasion approached but did not achieve statistical significance. This may be a power issue with the low number of MCC cases.

This is the first report to suggest the prognostic significance of ulceration in primary MCCs. These results need to be confirmed in a larger study and suggest that ulceration may be an important feature to be incorporated into the staging of MCC as it has been for melanoma.

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Dynamic skin expansion: preoperative application of a new device. ***R. Berg, R. George, H. Hristov.*** **Departments of Surgery and Oncology, Queen's University, Kingston, Ont.**

Two years ago we reported the use of preoperatively applied adhesive anchors to expand the skin surrounding areas of planned wide excision for malignancy. These anchors had been designed to facilitate secondary closure of open wounds.

As a result of that experience, we now report on our first cases using a new device designed to better address the preoperative setting.

The new design incorporates a non-adhesive elastomer into the mid-portion of an otherwise adhesive dressing. Application provides continuous traction in the axis of placement. Pre and postoperative photography document each lesion, planned excision and end results. Preoperative application is a minimum of 48 hours before planned excision. Patients are followed for flap viability, success of primary closure, infection rate, as well as a subjective (photographic) assessment of outcome.

Nine cases have been completed and represent areas associated with poor skin mobility and hypertrophic scarring. Three required resection in previously irradiated fields. Locations included shoulder, skin, ankle, scapula, radiated upper arm, radiated mid back and radiated chest wall. All cases were closed primarily without grafting. One patient had minimal flap necrosis along her suture line managed with dressing care alone, and 1 patient had a portion of her would opened for cellulitis/abscess. Each case is documented with photos.

Dynamic preoperative expansion facilitates primary skin closure of wide excision in difficult anatomic locations. The new device has proved safe and effective in our initial series.

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Improving the diagnosis of soft tissue masses: pain predicts nerve sheath origin while growth velocity suggests malignancy. Update of a prospective database.

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Soft tissue masses commonly present to primary care physicians. This study examines the clinical features of a soft tissue mass that predicts significant lesions.

This is an updated analysis of our soft tissue database with 246 consecutive adult patients referred for assessment of a non-nodal mass. Patient demographics, tumour characteristics, time to presentation and histological features are all recorded. Analysis is with Microsoft Excel and Palisade Stat Tools.

One hundred and six lesions had a malignant diagnosis. The most common benign diagnosis was a lipoma. The most common malignant diagnoses were lipo- and leiomyosarcomas. Pain as a presenting feature was highly correlated with the diagnosis of a nerve sheath tumour ($p = 0.0001$, odds ratio [OR] 33.7, confidence interval [CI] 4.6–692) however; pain at presentation could not predict malignancy. In multivariate analysis, predictions of malignancy remain size greater than 5 cm ($p = 0.005$) and patient perception of recent growth ($p = 0.0001$). A new lesion in older individuals also suggested malignancy ($p = 0.001$).

While lesion size predicts malignancy it is a late feature. Early detection of significant lesions may be enhanced by focusing on pain (suggesting peripheral nerve sheath origin) and recent growth, which is correlated with a malignant diagnosis.

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Laparoscopic gastrectomy for benign and malignant disease: a community hospital experience.

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This study reviewed our 3-year experience with the implementation of laparoscopic gastrectomy at a community hospital.

A retrospective chart review identified all patients that underwent laparoscopic gastrectomy at our centre between January 2004 and March 2007. Patient demographics, tumour characteristics, length of stay, operative time, and short-term outcomes (postoperative complications and death) were examined.

A total of 57 patients were identified and 31 (54%) were male. Median age was 68 years (range 31–90 yr). Forty-two (74%) and 7 (12%) patients presented with adenocarcinoma and gastrointestinal stromal tumour (GIST), respectively. Median operative time was 167 minutes (range 23–387 min). Conversion to open laparotomy was necessary in 12 cases (21%). Median length of stay was 6 days (range 0–48 d). There were 6 postoperative deaths, and 8 major complications, which included: myocardial infarction, pulmonary embolism, duodenal stump leak, bleeding, dehiscence, and obstruction. R0 resection was achieved in 38 of 50 (76%) malignant cases. Median number of lymph nodes that were pathologically evaluated was 10 (range 1–24).

To our knowledge, this is the largest series of laparoscopic gastrectomy cases performed in Canada. Laparoscopic gastrectomy can be performed in a community hospital setting with operative times and length of stay that are comparable to open cases. Our short-term outcomes are comparable with existing studies.

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Utility of a population-based cancer audit: patients with breast cancer in central south Ontario.

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We performed an audit of breast cancer patients who reside in central south Ontario. The study evaluated the staging ability of oncologists at the Juravinski Cancer Centre (JCC), and evaluated stage and treatment patterns for patients.

We used the Ontario Cancer Registry to identify a population-based random sample of 277 patients diagnosed with invasive breast cancer in calendar year 2004. Trained reviewers abstracted data from all hospital and JCC charts, including patient demographics, tumour stage, and all diagnostic test and treatment variables. Reliability testing demonstrated high consistency among abstractors, (Krippendorff $\alpha = 0.84$).

JCC oncologists and study abstractors were able to stage 81% and 99% of cases, respectively, and in 7% of cases the staging by JCC oncologists was inaccurate ($\kappa = 0.90$). The mean age of the study population was 61.4 years. Most patients ($n = 264$, 95.3%) were treated with surgery across 15 individual hospitals. Range of breast cancer surgery performed per hospital ranged from 1–65 cases. Sixty-two patients (22%) had no axillary surgery, and only 21 (8%) had a sentinel lymph