SELECTED ABSTRACTS

Does preoperative breast MRI significantly impact on initial surgical procedure and re-operation rates in patients with screen-detected invasive lobular

Sinclair K et al, Clin Radiol. *2016*, 71:543-50.
doi: 10.1016/j.crad.2016.03.011.

Objective

To investigate whether magnetic resonance imaging (MRI) changes the management of patients with screen-detected invasive lobular carcinoma (ILC).

Methods

A retrospective, controlled, single-centre analysis of 138 cases of screen-detected ILC was performed. All patients were assessed by a single multidisciplinary team as to whether preoperative MRI altered the initial management decision or reduced re-operation rates.

Results

Forty-three percent of patients had preoperative MRI. MRI guided surgical management in 40.7% patients. Primary mastectomy rates were not significantly different between the MRI and non-MRI groups (32% and 30% respectively, p=0.71). The MRI group had a lower secondary surgery rate (6.8% versus 15.2%); however, the results did not reach statistical significance, and there were no unnecessary mastectomies.

Conclusions

MRI can be used appropriately to guide primary surgery in screen-detected ILC cases and affects the initial management decision in 40.7% of patients. It does not significantly affect the overall mastectomy rate or re-operation rates, but reduces the likelihood of the latter. As a result of this review, the authors' local policy for the use of MRI in screen-detected ILC patients has been modified. For patients undergoing mastectomy for ILC, MRI is no longer performed routinely to search for contralateral malignancy as this has no proven added benefit.

Commentary

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MRI has higher sensitivity for detecting breast malignancy when compared to mammography or ultrasound.

Preoperative use of MRI is directed at assessment of local disease particularly when there is discrepancy between imaging findings and clinical findings and to look for additional malignant lesions in the same side breast or in the contralateral breast. This is believed to guide decision making at initial surgery and to reduce re-operation rates including re-excision and mastectomy -conversion.

While pre operative MRI is not indicated routinely for all invasive breast malignancy, its use in ILC is recognized by many guidelines and consensus groups because of the increased tendency of ILC for multifocal and bilateral disease.

This study reports that although MRI found additional lesions, affected the initial surgical decision in 40.7% and reduced the likely hood of re- surgery rates; there was no significant influence on the overall mastectomy rate or re-operation rate. The study has led to modifications in local protocol for preoperative MR imaging of patients with ILC at the author's center. This may reduce the burden of imaging, increased biopsy rates for benign lesions and undue waiting time for surgery. Hoverer, it is important to note that this is in contrast to the current recommendations.

Cost-Effectiveness of New Surgical Treatments for Hemorrhoidal Disease - A Multicentre Randomized Controlled Trial Comparing Transanal Doppler-Guided Hemorrhoidal Artery Ligation With Mucopexy and Circular Stapled Hemorrhoidopexy

Lehur PA et al., Annals of Surgery. 2016; 264:710-716.
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Objective

To compare Doppler-guided hemorrhoidal artery ligation (DGHAL) with circular stapled hemorrhoidopexy (SH) in the treatment of grade II/III hemorrhoidal disease (HD).

Background

DGHAL is a treatment option for symptomatic HD; existing studies report limited risk and satisfactory outcomes. DGHAL has never before been compared with SH in a large-scale multi-institutional randomized clinical trial.

Methods

Three hundred ninety-three grade II/III HD patients recruited in 22 centers from 2010 to 2013 were randomized to DGHAL (n = 197) or SH (n = 196). The primary endpoint was operative-related morbidity at 3 months (D.90) based on the

Clavien-Dindo surgical complications grading. Total cost, cost-effectiveness, and clinical outcome were assessed at 1 year.

Results

At D.90, operative-related adverse events occurred after DGHAL and SH, respectively, in 47 (24%) and 50 (26%) patients (P = 0.70). DGHAL resulted in longer mean operating time (44±16 vs 30±14 min; P < 0.001), less pain (postoperative and at 2 wks visual analogic scale: 2.2 vs 2.8; 1.3 vs 1.9; P = 0.03; P = 0.013) and shorter sick leave (12.3 vs 14.8 d; P = 0.045). At 1 year, DGHAL led to more residual grade III HD (15% vs 5%) and a higher reoperation rate (8% vs 4%). Patient satisfaction was >90% for both procedures. Total cost at 1 year was greater for DGHAL [€2806 (€2670; 2967) vs €2538 (€2386; 2737)]. The D.90, incremental cost-effectiveness ratio (ICER) was €7192 per averted complication. At 1 year DGHAL strategy was dominated.

Conclusions

DGHAL and SH are viable options in grade II/III HD with no significant difference in operative-related risk. Although resulting in less postoperative pain and shorter sick leave, DGHAL was more expensive, took longer, and provided a possible inferior anatomical correction suggesting an increased risk of recurrence.

Commentary

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SH is associated with less pain and a faster recovery when compared with traditional hemorrhoidectomy. In spite of the cost of the disposable device, it can be cost-effective. DGHAL based on a different principal seem to be more appealing. Literature comparing the two methods are sparse and RCTs nonexistent.

This study not only fills that void in terms of comparative morbidity of the two procedures but adds the extra dimension of cost benefit.

Surgical units in Sri Lanka wishing to convert to a newer surgical method for heamorrhoidal disease would benefit by this article. However the cost effectiveness has to be calculated for the local setting, which may be different to France where this study was done.

Factors to be considered in this calculation are morbidity of both procedures, local cost of the disposable device, availability or the investment cost of the Doppler scanner, in patient bed cost, income status of the patient and loss of income of in patient stay. Deriving this answer could be an attractive challenge for a surgeon – health economist team.

A detailed spatial analysis on contrasting cancer incidence patterns in thyroid and lung cancer in Toronto women

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Objective

Thyroid cancer has been rapidly rising in incidence in Canada; however, in contrast, lung cancer appears to be decreasing in incidence in Canadian men and stable in women. Moreover, disease-related mortality risk is generally very low in TC but high in LC. We performed a geographic spatial analysis in metropolitan Toronto, Canada to determine if there is regional variability of respective risks of thyroid cancer (TC) and lung cancer (LC), among women. Women were of particular interest for this study, given their known predilection for thyroid cancer.

Methods

The postal codes of all females with TC or LC, residing in metropolitan Toronto from 2004 to 2008, were geocoded to point locations according to 2006 Canadian Census data. The data were analysed using a log-Gaussian Cox Process, where the intensity of age-adjusted cancer cases was modelled as a log-linear combination of the population at risk, explanatory variables (race, immigration, and median household income), and a residual spatially varying random effect. For each respective malignancy, statistical models were fit to make quantify the relationship between cancer incidence and explanatory variables.

Results

We included 2230 women with TC and 2412 with LC. The distribution of TC and LC cases contrasted inversely among Toronto neighbourhoods with the highest TC incidence in the Northeast and the highest LC incidence in the Southeast. A higher proportion of Asian ethnicity was associated with higher regional risk of TC and lower risk of LC. A higher proportion of recent immigrants was associated with increased LC and lower TC risk, whereas median household income and proportions of African ethnicity were not significantly associated with risk of either cancer, after adjustment for other socio-demographic variables.

Conclusions

We observed contrasting regional distributions of female TC and LC cases in Toronto. The differences were partly attributed to ethnic composition variability and the proportion of recent immigrants, but substantial unexplained residual variation of incidence patterns of these malignancies exists, suggesting that more individual-level research is needed to

explain the regional variability of incidence of these malignancies.

https://bmcpublichealth.biomedcentral.com/articles/10.1186/s12889-016-3634-4? utm_campaign= BMC_TrendMD & utm_medium=cpc&utm_source=TrendMD

Commentary

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This is an interesting study done to evaluate the geographic variation of cancer incidence. Study showed cancer incidence is associated with ethnicity composition and the proportion of recent migrants but not with the median household income level in a given area. Usually disease modelling is done with individual characteristics such as demographics, disease related history, physical and biochemical parameters rather than considering social and natural environmental variables. Such approach will not only loose important geographic variation data with respect to disease occurrence but also it is possible that geographic variation can be reflected falsely on other variables.

Disease mapping is now emerging as a new discipline called geomedicine where social and natural environmental variables are considered as explanatory variables in addition to individual characteristics in modelling diseases like cancer. Model based geostatistics is a widely used approach in modelling diseases with respect to geography where general statistical principals are applied in modelling and inferencing geostatistical problems.

The risk of internal hernia or volvulus after laparoscopic colorectal surgery: a systematic review.

Toh JW et al.
Colorectal Disease 2016 Dec 1; 18(12):1133-41.

Objectives

To determine the incidence of internal hernias after laparoscopic colorectal surgery and evaluate the risk factors and strategies in the management of this serious complication.

Methods

Two databases (MEDLINE from 1946 and Embase from 1949) were searched to mid-September 2015. The search terms included volvulus or internal hernia and laparoscopic colorectal surgery or colorectal surgery or anterior resection or laparoscopic colectomy. We found 49 and 124 articles on MEDLINE and Embase, respectively, an additional 15 articles were found on reviewing the references. After removal of duplicates, 176 abstracts were reviewed, with 33 full texts reviewed and 15 eligible for qualitative synthesis.

Results

The incidence of internal hernia after laparoscopic colorectal surgery is low (0.65%). Thirty-one patients were identified. Five cases were from two prospective studies (5/648, 0.8%), 20 cases were from seven retrospective studies (20/3165, 0.6%) and six patients were from case reports. Of the 31 identified cases, 21 were associated with left-sided resection, four with right sided resection, two with transverse colectomy, one with a subtotal colectomy and in three cases the operation was not specified. The majority of cases (64.3%) were associated with a restorative left sided resection. Nearly all cases occurred within 4 months of surgery. All patients required re-operation and reduction of the internal hernia and 35.7% of cases required a bowel resection. In 52.2% of cases, the mesenteric defect was closed at the second operation and 52.6% of cases were successfully managed laparoscopically. There were three deaths (0.08%).

Conclusions

Mesenteric hernias are a rare but important complication of laparoscopic colorectal surgery. The evidence does not support routine closure for all cases, but selective closure of the mesenteric defect during left-sided restorative procedures in high-risk patients at the initial surgery may be considered.

Commentary

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This article emphasizes the known low incidence of internal hernias following laparoscopic colorectal surgery. Therefore it is not necessary to change the present practice of laparoscopic colorectal surgery to close the mesenteric space in each and every patient. Considering the very low incident (0.65%) and mortality (0.08%) of internal hernias following laparoscopic colorectal surgery it is of doubtful value even to carry out closure of mesenteric space on selected patients as suggested in the article as this may prolong the surgery time. In addition it is not clear by this article which criteria to be considered as high risk for internal hernia in laparoscopy group.

It would have been of much value if the authors had compared the incidence of internal hernia between open colorectal surgeries and laparoscopic surgeries as most probably they had gathered the relevant data according to the search terms used for article selection from data bases.