MRI-BASED PREDICTIVE FACTORS OF AXILLARY LYMPH NODE METASTASES IN BREAST CANCER

Objectives

To determine the accuracy of MRI in detecting axillary lymph nodes (ALNs) metastases preoperatively and to define predictive characteristics of ALN involvement in patients with invasive breast cancer.

Methods

Breast MR (3 Tesla) examinations of 169 patients with invasive breast cancer were reviewed at Hôtel-Dieu de France Hospital. Morphological parameters in addition to apparent diffusion coefficient (ADC) value were compared with pathological nodal status.

Results

The sensitivity and specificity of MRI in detecting ALN involvement were 87.5% and 55.6% respectively. The negative and positive predictive value of MRI was 81.64% and 66.34% respectively. The mean size of metastatic ALN was larger than that of negative ALN (13.9 mm vs. 10.9 mm, p = 0.000). ALNs larger than 12 mm were associated with higher risk of metastases (p = 0.000). The asymmetry of size between ipsilateral and contralateral ALNs was more significant in positive ALNs on pathology (p = 0.008 vs. 0.043). In a univariate analysis, the round shape of ALN, loss of fatty hilum, irregular contours and hypo-intensity/heterogeneous intensity on T2-weighted sequence were significantly predictive of lymph node metastasis (p = 0.000 for the four characteristics). In a multivariate analysis, only the round shape of lymph node and the hypo-intensity/heterogeneous intensity on T2-weighted sequence were significantly associated with lymph node metastasis (p=0.01 and p=0.018 respectively). The ADC value of ALN did not aid the differentiation between benign and metastatic lymph nodes (p = 0.862).

Conclusions

Conventional MRI using the ALN shape and the signal intensity in T2-weighted sequences can evaluate the axilla with high sensitivity.

Breast Plenary

IGCS19-0175

MRI-BASED PREDICTIVE FACTORS OF AXILLARY LYMPH NODE METASTASES IN BREAST CANCER

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Conclusions

mFI and high complexity surgery are predictive of Severe and Overall Complications. Patients’ pre-operative care profile evaluation may guide specialists in reducing, preventing and managing complications correctly. mFI seems to be effective in identify high-risk patients and represent a valuable tool to help health professionals in providing risk counseling and discussion of management for women undergoing surgery for gynecologic cancer.

IGCS19-0128

SHOULD WE OFFER MULTI-GENE TESTING TO ALL PATIENTS WITH BREAST CANCER: A COST-EFFECTIVENESS ANALYSIS

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Objective

To estimate incremental lifetime-effects, costs, cost-effectiveness and population impact of multigene-testing all BC patients compared to current practice of family-history/clinical-criteria based genetic (BRCA)-testing.

Methods

Cost-effectiveness microsimulation modelling study comparing lifetime costs-&-effects of BRCA1/BRCA2/PALB2 (multigene) testing all unselected BC-cases (Strategy-A) with family-history/clinical-criteria based BRCA1/BRCA2-testing (Strategy-B) in both UK and US populations. Data obtained from 11,836 population-based BC-patients (regardless of family-history) recruited to four large research studies in the UK (Predicting-Risk-of-Breast-Cancer-at-Screening (PROCAS: 1389 out of 57,000 women) & Prospective-Outcomes-in-Sporadic-versus-Hereditary-breast-cancer (POSH: 2883) studies); US (Kaiser-Permanente Washington Breast-Cancer-Surveillance-Consortium (BCSC) registry: 5892 out of 132,139 women) and Australia (Population-based BC-cases of the Australian-Breast-Cancer-Family-Study (ABCFS: 1670 women)). The main outcome measure was the incremental cost per quality-adjusted life-year (QALY) gained with a 3.5% annual discount. Parameter uncertainty was explored using 10,000 probabilistic sensitivity analyses.

Results

Compared with current clinical-criteria/family-history-based BRCA-testing, (BRCA1/BRCA2/PALB2) multigene-testing for all BC-patients would cost £10,470/QALY (UK) or $58,702/QALY (US) gained, well below UK/NICE and US cost-effectiveness thresholds of £30,000/QALY & $100,000/QALY. Probabilistic sensitivity-analysis shows unselected multigene-testing remains cost-effective for 98% UK/77% US health-system simulations. One year’s unselected panel-genetic testing can save 1,776 BC/OC-cases and 557 deaths in the
UK; and 8,258 BC/OC-cases and 2,143 deaths in the US. Correspondingly, 7 UK/32 US excess heart-disease deaths occur annually.

Conclusions Unselected multigene-testing for all BC patients is extremely cost-effective compared with family-history/clinical-criteria testing for UK and US health-systems. It prevents thousands more BC/OC cases and deaths. We recommend changing current policy to expand genetic-testing to all BC patients.

**IGCS19-0496**

**WEIGHT CHANGES AFTER TREATMENT IN A COLOMBIAN BREAST CANCER RETROSPECTIVE COHORT**

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Methods Descriptive retrospective cohort study with non-probabilistic convenience sampling of women with luminal A, stage IIIB invasive breast cancer, treated in two reference oncology centers in northeastern Colombia with surgery, chemotherapy, radiotherapy and hormone therapy during 2010 to 2017. An analysis of central tendency, univariate and bivariate measures was performed and comparisons of proportions with Chi-square (p<0.05) were assessed.

Results 1660 clinical records were reviewed, of which 74 patients met the inclusion criteria. At the start of the follow-up, 52 years was the mean age, and the average weight and BMI was 67kg and 26.9, respectively; none of the patients presented low weight, in fact, 68% of them were overweight. Also was noticed that no woman was classified as underweight at the end of the follow-up despite the occurrence of metastasis and the weight variability subgroup was identified.

Conclusions This is the first study that analyzes the weight variability in women with breast cancer in Colombia. The results show a tendency to overweight in this population and its possible relationship to the occurrence of metastasis at the end of the follow-up.

**IGCS19-0591**

**BEVACIZUMAB FOR ADVANCED STAGE OVARIAN CARCINOMA: A SINGLE CENTER EXPERIENCE**

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Methods A retrospective cohort study of all patients with advanced stage epithelial ovarian carcinoma (Stage III and IV) treated in one university affiliated medical center (2000–6/2017). Demographics and treatment outcome were compared between patients receiving bevacizumab in addition to standard chemotherapy to those treated with chemotherapy alone before the incorporation of bevacizumab into clinical practice. P value < 0.05 was considered significant.

Results Overall, 188 patients met inclusion criteria. Of them, 59 (31.4%) received bevacizumab and 129 (68.6%) received chemotherapy only. Median age and levels of CA-125 at diagnosis did not differ between patients receiving bevacizumab and those who did not (61 vs. 62 years, p=0.75 and 638 vs 561 U/mL, p=0.78, respectively). Rates of stage IV disease were similar between groups (16.9% vs 12.4%, p=0.4). Rates