THE IMPACT OF FINAL BREAST SURGICAL MARGINS DISTANCE AFTER NEOADJUVANT SYSTEMIC TREATMENT AND BREAST-CONSERVING SURGERY ON RECURRENCE AND SURVIVAL

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Introduction/Background There is no evidence that resection margins after breast conserving surgery (BCS), defined as 'no ink on tumor' can be applied to patients receiving neoadjuvant systemic treatment (NST). The study aim was to evaluate the impact of the distance of the resection margins on the loco-regional recurrence (LRR) and the survival of patients treated by BCS following NST.

Methodology This is a retrospective study including patients who underwent NST followed by BCS. The LRR-free survival (LRRS), disease-free survival (DFS) and overall survival (OS) was assessed according to the tumor margin distance status at final pathology. The Kaplan-Meier method was used to analyze survival and the Cox model was used to perform uni and multivariate analyses.

Results A total of 235 patients were included in this study. Median tumor size at diagnosis was 30mm (7–75mm). A neoadjuvant chemotherapy was administrated to 91.5% patients. A complete response at imaging has been found in 27.3% of patients and 32.5% of them showed no residual tumor at final pathology. The final pathology found positive ('no ink on tumor') margins in 8.9% patients and margins ≤1mm in 11.1% women. With a median follow-up of 63.4 months, there were 26 LRR. The 5 years LRR was 88.7% in patients with negative margins and 87.3% in those with positive margins (p=0.7093). The surgical margins >1mm seem to be more benefic, with a LRRS at 91.5% comparing to those with margins ≤1mm (78.4%, p=0.0013). This surgical margin, >1mm, have been found to be significant for both DFS (p=0.0006) and OS (p=0.0013).

Conclusion The surgical margin distance >1mm seem to be the most appropriate surgical margin for breast cancer patients treated with BCS after NST. This margin >1mm could be useful to ameliorate the LRRS (p=0.0013), the DFS (p=0.0006) and OS (p=0.0013) of these group of breast cancer patients.

Disclosures None

06. Ovarian cancer

THE RELATIONSHIP BETWEEN MELATONIN 1–2 RECEPTOR EXPRESSION IN PATIENTS WITH EPITHELIAL OVARIAN CANCER AND SURVIVAL

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Introduction/Background As many studies show, melatonin has antiproliferative, anti-angiogenic, apoptotic, immunomodulatory properties in many cancer types including ovarian cancer. Considering these effects of melatonin, we evaluated the relationship between melatonin1 (MT1) and melatonin2 (MT2) receptor expression in tumor tissues of patients with epithelial ovarian cancer, and disease-free survival (DFS) and overall survival (OS).

Methodology Patients who received primary surgical treatment for epithelial ovarian cancer in our clinic between 2000 and 2019 were retrospectively scanned through patient files, electronic database, and telephone calls. 142 eligible patients included in study and tumoral tissues were examined to determine MT1 and MT2 receptor expression by immunohistochemical methods. The percentage of receptor positive cells and intensity of staining were determined.

Results Sociodemographic characteristics such as age, body mass index (BMI) and menopausal status didn’t show any significant effect on DFS and OS. However, preoperatively measured serum Cancer Antigen 125 (CA125) level (p<0.001 for DFS and p<0.004 for OS), histopathological type (p=0.003 for DFS and p=0.006 for OS), residual tumor (p<0.001 for DFS and p<0.001 for OS), grade (p<0.001 for DFS and p<0.001 for OS), postoperative stage (p<0.001 for DFS and p<0.001 for OS), and melatonin1 receptor expression levels (p=0.018 for DFS and p=0.012 for OS) have shown some significant effects in survival analysis. Consequently, we focused on the evaluation of melatonin1 receptor expression levels over the biological variables of the patients.

Disclosures None

ROBOTIC SENTINEL LYMPH NODE DETECTION IN GYNAECOLOGICAL CANCERS

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Introduction/Background Sentinel lymph node (SLND) technique identifies the first node(s) draining any organ and uses ultra-staging to detect micro-metastases. SLND reduces surgical-related morbidity, lymphedema, lymphocyst formation and operative time.

Methodology Women requiring lymphadenectomy in endometrial cancer and cervical cancer at Guys and St Thomas Hospital (GSTT) were included. Data was collected prospectively and results were analyzed. Intra-cervical Indo Cyanine Green (ICG) was injected at two sites and surgery performed using Xi Davinci robot. Sentinel lymph node (SLN) were mapped using firefly fluorescent camera and sampled. Bilateral pelvic lymphadenectomy (BPLND) was performed in all patients after SLN sampling and para-aortic sampling for a select few. Patient demographic variables, sentinel lymph node positivity, diagnostic accuracy, negative predictive value, site of sentinel lymph node and complications were noted.

Results 52 patients underwent SLND as a part of robotic staging for gynecological malignancies (cervix and endometrium). Mean age was 65.5 years (56–82), ASA score=2 and mean BMI=31.8. A total hysterectomy and salpingo-ophorectomy was performed in addition to adhesiolysis, omental sampling and para-aortic sampling. The FIGO stages included stage-I (76) and Stage-III (18%). Median lymph node count in SLN was 3 (1–5) and BPLND was 15 (5–38). Nodal metastasis was found in positivity was 13.4% with the external ilac being most common sentinel nodal site. Para-aortic lymph node positivity was 3.84%. Diagnostic accuracy of SLND: Sensitivity 85.7%, specificity 100%, positive predictive value 100%, negative predictive value 97.83%. Complication rate was 11.1%.

Conclusion This pilot study validates the performance of sentinel lymph node sampling as accurate, comparable to international standards and mandates a change in institutional practice. SLND shall be the standard for nodal assessment in surgical staging for cancers at GSTT in the future.

Disclosures None
OS), and melatonin 1 receptor expression (p = 0.002 for DFS and p = 0.002 for OS) showed significant effect on DFS and OS. Melatonin 2 receptor expression had no effect on survival (p = 0.593 for DFS and p = 0.209 for OS).

Disclosures The results showed that higher the Melatonin 1 receptor expression, longer the disease-free and overall survival. It’s suggested that melatonin should be considered as adjuvant therapy for ovarian cancer patients in addition to standard treatment, and clinical progress should be observed.

#17 Figure 1 A: Relationship of IRS (Immunoreactivity Score) for MT1 receptor of 142 patients and disease-free survival. B: Relationship of IRS for MT1 receptor of 142 patients and overall survival.

Introduction/Background The aim of this study was to compare the disease-free survival (DFS) and overall survival (OS) of patients who underwent interval cytoreductive surgery after 3–4 cycles or 6 cycles of neoadjuvant chemotherapy (NACT) in advanced epithelial ovarian cancer patients in whom primary cytoreductive surgery could not be performed.

Methodology Out of 219 patients with advanced epithelial ovarian cancer, 123 patients received 3–4 cycles and 96 patients received 6 cycles of platinum based NACT. Afterwards, laparotomy was performed for interval cytoreductive surgery.

Results The disease-free survival and overall survival of patients were evaluated, no statistically significant difference was found when the patients who received 3–4 cycles of NACT and those who received 6 cycles of NACT were compared (HR: 1.047, 95.0% CI [0.779–1.407]; p = 0.746 for DFS, and HR: 1.181, 95.0% CI [0.818–1.707]; p = 0.368 for OS). Evaluating 123 patients who received 3–4 cycles of NACT; 87 patients (70.7%) without macroscopic residual tumor after interval cytoreductive surgery had significantly longer DFS and OS compared to 36 patients (29.3%) with any residual tumor (HR: 1.707; p = 0.002 for DFS, and HR: 1.921, 95.0% CI [1.125–3.282]; p = 0.013 for OS).

Conclusion The most important factor determining survival is whether macroscopic residual tumor tissue remains after interval cytoreductive surgery following NACT. All kinds of aggressive surgical intervention should be performed to ensure optimal cytoreduction (r = 0) after NACT.

#18 Figure 1 A: DFS; 3–4 cycles of NACT versus 6 cycles of NACT in patients with no residual tumor. B: OS; 3–4 cycles of NACT versus 6 cycles of NACT in patients with no residual tumor.

Disclosures In patients with advanced ovarian cancer, there is no significant difference in DFS and OS between 3–4 cycles or 6 cycles of NACT.

#20 A PILOT STUDY OF CIRCULATING MICRORNAs-125B AS A DIAGNOSTIC & PROGNOSTIC BIOMARKER FOR EPITHELIAL OVARIAN CANCER

Introduction/Background The microRNAs (miRNAs) represent a new class of biomarkers and miRNA-125B has been shown to be overexpressed in epithelial ovarian cancer (EOC). This study was conducted to investigate plasma miRNA 125 B as a diagnostic biomarker in EOC.

Methodology Venous blood sample of patients with clinically diagnosed ovarian tumors was drawn. After tissue confirmation of benign or malignant epithelial ovarian tumor of surgically resected specimen, patients were enrolled into the study and their blood samples were further analysed for miRNA expression. Patients with EOC were defined as cases and those with benign pathology report served as controls.

Commercial kit was used to isolate RNA and then reverse-transcribed into cDNA. The real-time PCR experiments were repeated at least thrice. Data analysis for qPCR was performed by the comparative threshold cycle (Ct) method. The Ct values of housekeeping U6 snRNA and test mir-125b were used to calculate the delta Ct (ΔCt) values between test and reference genes in both controls and cases. Delta delta Ct (ΔΔCt) values between controls and cases were based on difference in ΔCt values between the two sets. This was used to calculate the exponential difference based on 2−ΔΔCt. The values were normalized and expressed in terms of fold expression relative to controls.

Results We enrolled 32 cases and equal number of controls. Real time relative quantification analysis showed more than 6-fold increase in serum mir-125B expression among EOC than controls. Patients in early stages had significantly higher levels of miRNA-125b than those in late stages (P = 0.003).