172 Poster

Characteristics of Non-invasive Ductal Carcinoma of the Breast

N. Tamura[1], H. Tsuda[2], T. Kinoshita[3], Y. Fujiwara[3], K. Sugihara[4]. *[1]National Cancer Center Hospital Tokyo/Tokyo Medical And Dental University, Breast Oncology Division, Tokyo, Japan; [2]National Cancer Center Hospital Tokyo, Pathology And Clinical Laboratories Division, Tokyo, Japan; [3]National Cancer Center Hospital Tokyo, Breast Oncology Division, Tokyo, Japan; [4]Tokyo Medical And Dental University, Surgical Oncology Division, Tokyo, Japan*

Background: It is important for survivors of breast carcinoma, who hope to become pregnant in the future, to determine if adjuvant hormonal therapy is necessary even when diagnosed with non-invasive ductal carcinoma (DCIS). Pathological characteristics of DCIS have been reported in Europe and the United States, but not in Japan where the population of breast cancer patients is younger and more often hormonal receptor positive, and whose contralateral breast carcinoma event (CBTR). Our study was intended to determine clinicopathological characteristics of non-invasive carcinoma in Japanese patients.

Materials and Methods: Of 5,731 patients who underwent breast resections in our facility from 1993 to 2008, 400 (6.9%) were diagnosed pathologically with DCIS or micro-invasive ductal carcinoma <5 mm. Clinicopathological characteristics retrospectively analyzed for 368 (6.4%) patients included age, menstruation, body mass index (BMI), family history, bilateral carcinoma, size, type, structural atypia, nuclear atypia, mitotic count, necrosis, hormonal receptor (HR) and HER2-neu subtypes, surgical method, ispilateral event (IBTR), CBTR and distant recurrence.

Results: Partial mastectomies were performed on 146 patients (39.7%) (Group PM) and 222 patients (60.3%) underwent total mastectomies (Group TM). There were six cases of IBTR (4.1%) and 17 cases of CBTR (4.6%) among all 368 patients. With respect to univariate analysis of IBTR cases, there were significant differences in age (<40 years; $p = 0.04$) and margin (<1 mm; $p = 0.002$). As for multivariate analysis, there was a significant difference in margin (<1 mm; odds ratio [OR]: $8.6x10^6$, 95% confidence index [CI]: 2.15-; $p = 0.01$). Among the PM Group, there were no significant differences between hormonal therapy and radiation therapy while in stratification for age (<40), BMI and margin (<1 mm) were significantly different in (Group PM. Significant differences with univariate analysis for CBTR cases included type (non-comedo; $p = 0.002$), necrosis (negative; $p = 0.03$), size (>1.3cm: $p = 0.06$) and nuclear grade (NG1; $p = 0.07$). In terms of multivariate analysis, there was a significant difference in type (non-comedo; OR: $10.9x10^7$, 95% CI 6.53-; $p = 0.007$).

Conclusions: Our findings indicate that there are different risk factors for IBTR and CBTR events and the risk for CBTR events may depend on unknown factors that keep a widespread non-invasive ductal carcinoma both low grade and without invasion.

173 Poster

Flat Epithelial Atypia: Its Management and Outcome in Four Dutch Teaching Hospitals

P. Ghuijs[1], C. Boetes[2], C.H.M. van Deurzen[3], F.W. van der Ent[4], E.M. Heuts[1], L.J.A. Strobbe[5], K.K.B.T. van de Vijver[6], B. de Vries[6], C.A.P. Wauters[7], M.L. Smidt[1]. *[1]Maastricht University Medical Centre, Surgery, Maastricht, The Netherlands; [2]Maastricht University Medical Centre, Radiology, Maastricht, The Netherlands; [3]Daniel den Hoed, Pathology, Rotterdam, The Netherlands; [4]Orbis Medical Centre, Surgery, Sittard-Geleen, The Netherlands; [5]Canisius Wilhelmina Ziekenhuis, Surgery, Nijmegen, The Netherlands; [6]Maastricht University Medical Centre, Pathology, Maastricht, The Netherlands; [7]Canisius Wilhelmina Ziekenhuis, Pathology, Nijmegen, The Netherlands*

Background: Flat Epithelial Atypia (FEA) is a presumably neoplastic alteration of terminal duct-lobular units, characterized by the replacement of native luminal epithelium by ductal cells demonstrating low-grade cytologic atypia. The architecture shows stratification of epithelial cells. FEA is often accompanied by microcalcifications and therefore discovered in biopsies following screening mammography. FEA is frequently seen in association with ADH, DCIS, lobular neoplasia and invasive tubular carcinomas. There is emerging evidence suggesting FEA may represent a precursor to DCIS. The risk of subsequent breast carcinoma remains to be defined. The aim of this study is therefore to inventorise the management and outcome of solitary FEA in histological biopsies in four Dutch teaching hospitals.

Materials and Methods: Data of this retrospective multicentre study were collected in a database. Local pathology databases were screened with the terms: 'FEA', 'Flat Epithelial Atypia', 'columnar atypia' and Dutch equivalents. Results were manually screened, only including solitary FEA. Patient files were viewed for information on presentation, mammography, ultrasound and management: surgery vs follow-up. In case of excision, definitive pathology was added.

Results: The search resulted in 184 cases, of which 78 solitary FEA. The management of these patients consisted of follow-up for 45 patients (58%) and lumpectomy (n = 76) or mastectomy (n = 2) for 33 (42%). No incidents occurred in the follow-up group so far. Definitive pathology of excision showed no abnormalities or solitary FEA in 19 patients; other findings were ADH in 6, LCIS in 3 and DCIS in 6 patients. Invasive disease (ID) was found in 3 patients. Reason for choosing mastectomy was contralateral malignant disease; definitive pathology showed no abnormalities.

Conclusions: No consistent management exists concerning solitary FEA. DCIS or ID was discovered in 18% of all surgical patients. Therefore, FEA can be seen as a red flag, indicating the possible presence of a more malignant lesion. Also, one hospital used the diagnosis of FEA inconsistently and interchangingly with other terms. A shortcoming of this study is the retrospective gathering of data, which hampers the identification of reasons for chosen management. Additional research is warranted, preferably as a multicentre randomized controlled trial comparing surgery vs follow-up.

174 Poster

Are Bilateral Breast Cancers Different From Breast Cancers Coexisting with Ovarian Cancer?

E. Senkus-Konefka[1], J. Szade[2], B. Pieczynska[2], A. Badzio[1]. *[1]Medical University of Gdansk, Department of Oncology and Radiotherapy, Gdansk, Poland; [2]Medical University of Gdansk, Department of Pathology, Gdansk, Poland*

Background: Bilateral breast cancers and breast cancers coexisting with ovarian cancer are associated with genetic predisposition more frequently than sporadic cases. The aim of our study was to compare the morphological and immunohistochemical characteristics of bilateral breast cancers and breast cancers coexisting with ovarian cancer.

Materials and Methods: Tumor morphology and expression of 6 immunohistochemical markers was assessed in a tissue microarray (TMA) containing cores from 174 tumors from patients with bilateral breast cancer (B), 23 breast tumors from patients with breast-ovarian cancer syndrome (O) and 2 breast tumors from patients with coexisting ovarian and bilateral breast cancer (BO). Markers analyzed included hormone receptors (ER, PgR), HER2, CK 5/6, E-cadherin and vimentin.

Results: Majority of tumors in all subgrous (B, O, BO) were invasive ductal cancers (83,3%, 91,3%, 100%). Grade 3 tumors were more common in O (60,9%), compared to B (35,6%). 82,6% of O and 58,6% of B had no intraductal component; extensive intraductal component was present in 25,3% of B and in none in O. Strong ER and PgR expression was present in 72,8% and 56,1% of B, and 55% and 36,4% of O, respectively. HER2 was overexpressed (3+) in 18,2% and 4,8% of B and O, respectively. 6% and 15,8% of B and O had triple negative phenotype. Strong expression of CK5/6 (>10% of cells) was present in 47,6% of O and 19,1% of B, no expression was found in 51,6% of B and 28,6% of O. Weak expression of vimentin (<1% of cells) was present in 69,2% of B and 33,3% of O. No differences in E-cadherin expression were identified between subgroups.

Conclusion: Breast cancer tumors from patients with breast-ovarian cancer syndrome are characterized by higher incidence of high grade, ER, PgR and HER2 negativity, strong expression of CK5/6 and lower incidence of intraductal component compared to with bilateral breast cancers.

175 Poster

Clinicopathological Pattern and Prognostic Influence of Neuroendocrine Differentiation in Breast Carcinomas

N. Naseem[1], A.H. Nagi[1], F. Rehman[1], S. Anwar[2]. *[1]University of Health Sciences Lahore Pakistan, Histopathology, Lahore, Pakistan; [2]Sharif Medical and Dental College Lahore Pakistan, Histopathology, Lahore, Pakistan*

Background/Objectives: Neuroendocrine differentiation (NED) has been found and suggested as a marker of poor prognosis in a subgroup of a variety of carcinomas including a significant minority of breast carcinomas. The need to develop more effective therapies for breast cancer has led to investigations in understanding the molecular mechanisms of their differentiation process, in particular NED based on a theoretical assumption that NE-differentiated tumours may be associated with an adverse prognosis, earlier dissemination and greater chemosensitivity.

This study was designed to assess the immunohistochemical expression of NE markers, chromogranin A (CgA) and neuron specific enolase (NSE) and compared it with the histidine decarboxylase (HDC) immunohistochemistry in various subtypes of breast carcinomas in our female patients.