

lymphadenectomy was performed at the axillary level III with an average of 17 lymph nodes removed (SD 6.40) and 46% had positive lymph nodes. Most had advanced pathological stage (57% II and 23% III) and 86% were ductal carcinoma infiltrante. O adjuvant treatment with chemotherapy was performed in 59%, the adjuvant radiotherapy performed in 63% and adjuvant hormone therapy in 68%. Patients were followed for a median 61 months (1–94), 16% of deaths occurred in the period, with average survival time of 82 months (95% CI 81–84) (Figure 1). In Kaplan-Meier analysis, the variables that were statistically associated with better overall survival were initial staging ($p < 0.000$), negative lymph nodes ($p < 0.000$), tumor size ($p < 0.000$), number of lymph nodes removed ($p = 0.005$), adjuvant chemotherapy ($p = 0.013$) and neo-adjuvant ($p < 0.000$), adjuvant hormone therapy ($p = 0.001$), CDI ($p = 0.005$), conservative surgery ($p < 0.000$).

Conclusions: Overall survival is similar to data found in the literature for staging. The results suggest the need for early diagnosis and treatment.

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Poster

Breast Cancer Control in Iran: National Screening/specialized Breast Unit, Which One is the Urgent Priority?

A. Joulaee¹, M. Kadivar², M. Kalantari³, S. Joolaei⁴, N. Bahrani⁵, F. Solati⁶, I. Neshandar⁷, H. Azizmohammadi⁷, S.H. Hosseini⁸, G. Mazdaee⁹. ¹Shahid Beheshti University Of Medical Science, Breast Unit, Tehran, Iran; ²Tehran University Of Medical Science, Pathology, Tehran, Iran; ³Shahid Beheshti University Of Medical Science, Radiology, Tehran, Iran; ⁴Tehran University Of Medical Science, Nursing And Midwifery Education, Tehran, Iran; ⁵Artesh University, Department Of Statistic, Tehran, Iran; ⁶Shahid Beheshti University Of Medical Science, Pathology, Tehran, Iran; ⁷Shahid Beheshti University Of Medical Science, Nuclear Medicine, Tehran, Iran; ⁸Iran Mehr Hospital, Pathology, Tehran, Iran; ⁹Laleh Hospital, Clinical Oncologist, Tehran, Iran

Background: Rapid correct diagnosis and treatment is the key point in breast cancer control worldwide. Screening decreases breast cancer mortality through detection of small non palpable lesions. Due to high cost, the need for enough imaging centers and radiologists actually it is not affordable for many health care systems in populated low resource countries.

Specialized Breast Unit is a cost effective program. While increasing the accuracy and the quality of care the total cost of diagnosis and treatment of breast disease is significantly decreased. More there is limitation of health budget more it is important to go through this program as an urgent act for breast cancer control according to international guidelines. In this study we try to show the actual problems of breast cancer in Iran and the efficacy of Specialized Breast Unit to solve them.

Material and Method: All published data about breast cancer in Iran are reviewed since 2001 to 2011 to list the problems. Then the workflow and outcome of our unit between 2003 to 2011 with total 52 114 visits are analyzed to show how does it help to solve these problems.

Results: Younger age of the patients, late presentation, delayed diagnosis and small number of non palpable lesions are the major features of breast cancer in Iran. Mastectomy and axillary dissection is the dominant approach. Cancer diagnosis is based on excisional/incisional biopsy or frozen section. Sentinel node biopsy, reconstruction and screening are offered in few centers.

Multidisciplinary team work in specialized breast unit provides rapid assessment of breast symptoms with correct pre-operative imaging. Trucut biopsy is done for all suspected palpable and non palpable lesions. This simple act has resulted in tailored surgery (conservative, mastectomy with or without immediate reconstruction) and sentinel node biopsy for all eligible cases and active participation of patients in treatment plan. All women are offered sporadic screening when indicated. Team work approach has decreased the number of visits and unnecessary surgeries.

Conclusion: Correct diagnosis and treatment of breast cancer as a life threatening disease is the duty of all health care systems regardless of their budget. If screening as the standard for early detection in asymptomatic women is considered as an option, **Specialized Breast Unit** is an obligation for correct diagnosis and treatment of both symptomatic and asymptomatic breast cancers. It is cost effective and helps to shift from dominant Halstead concept through international standards even in low resource countries. Without these referral units no attempt can be done for breast awareness programs, training and further screening.

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Poster

Radial Scar and Its Association with Malignancy: Retrospective Audit

D. Akolekar¹, D. Kulkarni¹, M. Barber¹. ¹Western General Hospital Edinburgh, Breast Unit, Edinburgh, United Kingdom

Background: Radial scar/complex sclerosing lesions (RS/CSL) arise in the breast tissue without any previous trauma/surgery. They are not 'scars' in

the true sense and the likely cause is either localised inflammatory reaction or ischaemia of the breast tissue. The incidence rate of radial scar has gone up significantly due to screening programme.

The reported prevalence in the screening programme is between 0.1 and 2.0 per 1000 mammograms.

We reviewed cases of RS/CSL treated in our hospital over a period of five years (2004–2009) in this retrospective audit.

Materials and Methods: We included all patients diagnosed with radial scar (on triple assessment) that had core biopsy followed by excision biopsy in this audit.

The case notes were obtained and studied for clinical, radiological and pathology details such as palpable abnormalities, mammographic and ultrasound appearance, micro calcification, size of the lesion on radiology and final pathology, and type of associated cancer. Correlation was made with Ultrasound, Mammography, core biopsy findings and final histology.

Results: 73 case notes were made available for the audit (59 screen detected, 14 symptomatic clinic).

27 (37%) patients had associated palpable abnormality (nodularity, lump, tenderness, thickening) on clinical examination.

The mammographic abnormalities reported were typically distortion of architecture (DOA: 57/73) or opacity (10/73). Six patients had associated microcalcification with DOA. Average size of the lesion on radiology was 14.6 mm.

R-Score analysis (R score refers to mammographic score: ranging from 1 to 5): Mean = 3.63, standard error = 0.1, Standard deviation = 0.81, Median = 4.00.

U Score analysis: (This is similar scoring to R score from 1 to 5) on Ultrasound. Mean = 3.39, standard error = 0.12, Standard deviation = 1.00, Median = 3.00.

All patients had Ultrasound/stereo wire guided excision biopsy. Final histology confirmed that 17/73 (23.2%) had associated ductal carcinoma in situ (DCIS) and/or invasive cancer (DCIS in 10/73 cases, tubular carcinoma 4/73 cases, 1/73 Invasive carcinoma grade 1, and two cases of DCIS with invasive and tubular carcinoma).

The invasive carcinoma associated was tubular variety or low grade (grade 1) cancer.

Four patients had lobular carcinoma in situ (LCIS) and one patient had small focus of atypical lobular hyperplasia.

There was no significant association between clinical abnormality, size of the scar or mammographic appearance and DCIS/invasive cancer.

Conclusion: In this series, 23.2% of cases with radial scar had associated DCIS or invasive cancer.

There was no significant correlation between clinically palpable abnormality, size of the radial scar or mammographic appearance and association with DCIS or Invasive cancer.

The associated invasive cancer with radial scar is low grade, mainly tubular cancer.

Based on these findings, those with a finding of radial scar should be advised to undergo excision due to the risk of associated disease.

Wednesday, 21 March 2012

12:00–13:15

POSTER SESSION

Pathology

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The Clinical Features and Prognosis of Tubular Breast Cancer

M. Izquierdo¹, F. Tresserra², I. Rodriguez³, R. Fabregas¹, M. Cusido¹, C. Ara¹, S. Baulies¹. ¹Institut Universitari Dexeus, Gynaecology, Barcelona, Spain; ²Institut Universitari Dexeus, Patology, Barcelona, Spain; ³Institut Universitari Dexeus, Epidemiology, Barcelona, Spain

Background: Compare the clinical features and prognosis of Tubular Breast Cancer with the rest of Breast Cancer Grade I.

Materials and Methods: Analyzed all Tubular breast cancer studied in Breast Diseases Committee during the period 1990–2009, comparing the clinical features and prognosis of Tubular breast cancer with the rest of breast cancer grade I, the free disease survival were analyzed with Kaplan Meier curves.

Results: Studied 170 cases, 41 (24.1%) Tubular Breast Cancer and 129 (75.9%) the rest of Breast Cancer Grade I. No differences in the average age of patients with Tubular Breast Cancer and Breast Cancer Grade I. (51.9 versus 52.7), family history, parity, fertility treatment, nulliparous, menopausal status, tumour size, and hormonal receptors. HER2 receptors are more frequent in Breast Cancer Grade I. Two cases of Tubular Breast Cancer (4.8%) less than 15 mm have nodal involvement. In Tubular

carcinomas disease free survival at 5 years was 97% and 93% at 10 years. In the rest Grade I carcinomas disease free survival at 5 years was 95% and 89% at 10 years.

Conclusions: Tubular breast cancer is a specific type of breast cancer with an excellent prognostic and survival, but is necessary in all cases axillary node study.

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Poster

Usefulness of a New Thin-plastic-adhesive-film Method for Pathological Examination of Intraoperative Sentinel Node Biopsy

H. Hashide¹, H. Makino², H. Shibuya¹, K. Mituma¹, M. Iraha², C. Toshikawa². ¹Niigata City General Hospital, Pathology, Niigata, Japan; ²Niigata City General Hospital, Breast Surgery, Niigata, Japan

Background: Intraoperative frozen sections (FSs) of sentinel lymph nodes (SLNs) can be used to detect metastatic disease, allowing immediate axillary lymph node dissection. However, pathological inconsistency in the SLN diagnosis is sometimes encountered when the results of FSs and permanent sections are compared. One main reason for the inconsistency is inferior quality of FS slides. In this study, we evaluate the utility of a new thin-plastic-adhesive-film (Kawamoto's) method to improve the quality of FS slides in intraoperative diagnosis of SLNs.

Material and Methods: 145 breast cancer cases underwent a sentinel node biopsy between August 2010 and November 2011. All SLN samples were prepared using adhesive film (Cryofilm Transfer Kit; Finetec Co., Tokyo, Japan) attached to samples before cutting, and stained with hematoxylin and eosin (H&E). Permanent sections were later prepared from the remaining frozen tissues and examined using H&E staining without additional immunohistochemical staining. Accuracy, specificity and false-negative rate of FSs were compared with previous data (208 cases) without Kawamoto's method between January 2009 and July 2011.

Results: The final pathological results showed metastasis in 29 SLNs (20%), of whom one case was diagnosed as negative by the FS. Accuracy, specificity and false-negative rate of FSs were 99%, 100% and 3.4%, respectively. The previous data of FSs without Kawamoto's method were 92%, 100% and 8.3%, respectively. Almost all FS samples with Kawamoto's method were fully embodied without technical artifacts such as sample defect and wrinkles, and were especially suitable to detect micrometastasis or isolated tumor cells in subcapsular sinus areas of lymph nodes.

Conclusions: Kawamoto's method improved the quality of FS slides and the results of the accuracy and false-negative rate of intraoperative diagnosis of SLNs. This procedure does not need special technique or expensive running cost, and thus is available in all other laboratories.

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Poster

Lymphangiogenesis as a Prognostic Marker in Breast Cancer Using D2-40 as Lymphatic Endothelial Marker – A Preliminary Study

A. Kumar¹, V. Pandey¹, M.A. Ansari¹, V. Srivastava¹, M. Kumar². ¹Institute of Medical Sciences, Surgery, Varanasi, India; ²Institute of Medical Sciences, Pathology, Varanasi, India

Background: The markers of prognosis are used to predict the clinical course of disease and the outcome for patients with invasive breast cancer. Our objective was to investigate the relationship lymphangiogenesis and the process of lymphatic invasion (LVI) with well-known prognostic markers.

Methods: Thirty five surgically treated patients with invasive breast cancer were evaluated prospectively. Tumour lymphangiogenesis and lymphatic invasion was assessed using D2-40 endothelial marker and was correlated with various clinico-pathological prognostic parameters.

Results: The mean age was 45.97±12.09 years (range 30–80 years). LMVD ranged from 5/hpf to 56/hpf with a mean score of 13.4±10.8 and median of 9. LMVD correlated significantly with tumour size (p=0.003), histological grade (p=0.046), lymph node status (p=0.030). Lymphovascular invasion on D2-40 staining [LVI-D40] was found in 13 (37.1%) cases compared to 6 cases (17.1%) on H&E staining showing a poor agreement (k=0.244). LVI correlated significantly with lymph node status (p=0.011). There was a strong association between tumour size (p=0.142), histological grade (p=0.066) though the correlation was not statistically significant. There was no significant correlation of LMVD and LVI with stage, estrogen receptor, progesterone receptor or HER2/neu immunoreactivity. The mean LMVD in LVI positive patients was higher (p=0.001).

Conclusion: The high LMVD and positive LVI shows a close relationship with known markers of poor prognosis. The presence of high LMVD and LVI can predict a worse outcome for patients with invasive breast cancer and may be used as an indicator of aggressive behaviour, metastatic ability (nodal and systemic) of the primary.

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Poster

Intra-operative Use of One Step Nucleic Acid Amplification (OSNA) for Whole Sentinel Lymph Node Analysis in Breast Cancer Patients

S. Woelfl¹, S.T. Bogner¹, G. Bronger¹, A. Bergmayr¹, K. Pühringer¹, P. Schrenk², A. Sir². ¹Pathology, AKH Linz, Linz, Austria; ²Surgery, AKH Linz, Linz, Austria

Intra-operative use of One Step Nucleic Acid Amplification (OSNA) for whole sentinel lymph node analysis in breast cancer patients.

Background: Several clinical studies have shown that the molecular OSNA method has a comparable performance as in-depth histology, containing step-sectioning and immunohistochemical staining, in the diagnosis of breast cancer sentinel lymph node (SLN) metastases. We describe OSNA use for our routine intra-operative SLN analysis in breast cancer patients.

Material and Methods: 334 SLNs from 162 breast cancer patients (SLN/patient ratio: 2.1) were investigated with OSNA. The whole SLN was homogenised, and an aliquot of the lysate was investigated in the automated OSNA instrument with a ready-to-use reagent system. The amplification technique uses CK19 mRNA as a marker and yields qualitative results (+++, +, -) as well as CK19m RNA copy number. A (++) is equivalent to a macrometastasis, (+) to a micrometastasis, and (-) negative. In case of a positive result axillary dissection was nearly always performed during the same surgery.

Results: In 61 patients OSNA gave a positive result (30 samples with ++, 62 samples with +), resulting in a positivity rate of 37.7%. In 101 patients the OSNA result was negative. The pT and the axillary non-SLN status, as determined by H&E, of every patient were correlated to the OSNA results in each patient.

Conclusions: With OSNA a standardised analysis of the whole SLN can be performed, thereby avoiding second surgeries and any sampling bias caused by uninvestigated SLN tissue. The exact SLN status can be obtained intra-operatively.

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Poster

Primary Mucinous Breast Carcinoma of Columnar Cells Resembling Ovarian Cancer

N. Tsoukalas¹, N. Apostolikas², M. Tolia¹, A. Papakostidi¹, G. Lypas¹, N. Pistamantzi¹, C. Panopoulos¹, G. Koumakis¹, V. Barbounis¹, A. Efremidis¹. ¹"Saint Savvas" Anticancer Hospital, Department of Medical Oncology, Athens, Greece; ²"Saint Savvas" Anticancer Hospital, Department of Pathology, Athens, Greece

Background: Primary mucinous breast carcinoma of columnar cells is a very rare subtype of breast neoplasms. Sometimes the diagnosis of this rare entity is quite difficult.

Case report: A 74-year-old woman presented with a left breast tumor, measuring 7 × 7 cm, in the upper-lateral quadrant, with inflammatory components (peau d'orange). She reported a personal history of cholecystectomy, diabetes mellitus under medication and allergic predisposition and no family history. Four months later, a core biopsy showed infiltrating ductal carcinoma, of no specific type, grade II, ER(-), PR(-), and HER2(-) (triple negative). The TNM clinical staging was T4cN3M0, (Stage IIIC). She was treated with 3 cycles of Cyclophosphamide and Adriamycin, followed by 2 cycles of Cisplatin – 5FU, due to progressive disease, with axillary lymph node block. The re-evaluation showed minimal response and the tumor was considered marginally operable.

A left mastectomy with an attempt of radical axillary resection was performed. The histology showed two tumors in the tail of Spence which consisted of lymph tissue, infiltrated by adenocarcinoma with high columnar cells. There were foci of mucous production and extended necrosis. In addition there was infiltration of the axillary lymph nodes. The immunohistochemistry was positive for Keratin-7 and CEA, focally positive for Keratin-20 and negative for Vimentin, CA 19-9, CA125, ER, PR, C-erb-B2, GCDEP-15 and TTF-1. The immunohistochemistry, in conjunction with the tumor morphology, is compatible either with metastatic ovarian cancer, or primary mucinous breast carcinoma of columnar cells. The work up failed to reveal any suspicious lesion (neither ovarian, nor pulmonary). During local therapy with radiotherapy there was a tumor progression (cutaneous nodules). The patient died 16 months after diagnosis with pulmonary metastases and anterior chest wall infiltration.

Conclusion: The primary mucinous breast carcinoma of columnar cells is a rare entity. It is a subtype of mucinous producing carcinomas of the breast. The clinical features are similar with the common infiltrating ductal breast adenocarcinomas.