6q, 7q, 16q, and Xp were significantly different between the two groups and further exploration of these regions to identify potential biomarkers of LCIS progression is warranted.

No conflicts of interest

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Management of radial scars as high risk lesions: Is there any rationale for hormonal chemoprevention?

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Background: Radial scar is a benign high risk lesion with mammographic and sonographic features that can mimic carcinoma. However, neither mammographic nor sonographic features of radial scars are predictive of the absence or presence of associated malignancy where it can present a variety of mammographic characteristics. There is an ongoing debate on management of these lesions. We analyzed the clinicopathological along with molecular features of radial scar lesions that could affect our management strategies.

Material and Method: Thirty eight radial scar lesions were identified in 37 patients who underwent breast surgery between January 2008 and May 2013. The lesions were classified as 'pure radial scar' and 'malignancy & radial scar'. Clinical, radiological and histopathological characteristics were analyzed along with molecular subtypes of the associated malignancy.

Results: Median age of the patients was 41 (27−57). Twenty-four patients (66 %) had microcalcifications in mammograms. The most common management was excisional biopsy after localization with hook wire (66%) because the lesions were nonpalpable. Twenty-five patients (68%) were found to have 'pure radial scar lesions', whereas 12 patients (32%) had malignancy & radial scar. Patients older than 45 years were more likely to have radial scar associated with malignancy in patients older (radial scar & malignancy 67% vs radial scar 31%, respectively; $p = 0.04$).

There were 7 (59%) ductal carcinoma in situ (DCIS), 4 (33%) invasive ductal carcinoma and 1 (8%) tubular carcinoma in surgical specimens of patients with malignancy. Median tumor size was 7 mm for invasive carcinoma (2−13 mm). All invasive tumors were low grade (80%) or intermediate grade (20%) and luminal A type since they were positive for estrogen and progesterone receptors with low Ki-67 scores (<20%). All patients with malignancy had negative sentinel lymph node biopsy for metastasis and had stage 0/1 breast cancer. In one patient, intraoperative frozen section of the lesion was misguiding, as thought to be cancer. Therefore, the patient underwent sentinel lymph node biopsy, however, the definitive pathology was 'pure radial scar'. In definitive pathology, the majority of the radial scar lesions (90%), whether it was associated with malignancy or not, were found to be with other high risk lesions (i.e. atypical, flat or columnar hyperplasia, intraductal papilloma or lobular carcinoma in situ).

Conclusions: Our results also suggest that radial scars have been associated with other high risk lesions. Especially patients over 45 years old have high risk for associated DCIS or early stage hormone receptor positive luminal A type breast cancer with favorable biological features. Therefore, hormonal chemoprevention such as tamoxifen may be considered for those patients diagnosed with radial scars with subsequent close surveillance in order to decrease their breast cancer risk.

No conflicts of interest

Thursday, 20 March 2014

POSTER SESSION

Surgery

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Comparison of intraoperative ultrasound guided and radio guided detection of non-palpable breast cancer lesions

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Background: Various methods of intraoperative guidance are used for intraoperative detecting of non-palpable early breast cancer lesions. We have analyzed the results of the intraoperative ultrasound guided occult lesion localization (IUSOLL) method, and compared to the results obtained with the application of radio guided occult lesions localization (ROLL) method.

Materials and Methods: Our study enrolled a total of 166 female patients. For all of them a combination of intraoperative ultrasound and the ROLL method were used in a way that we first did an excisional biopsy guided by intraoperative ultrasound hand held probe and later, using the gamma probe, we removed the preoperatively marked remaining radioactive tissue. SNB procedure followed for early breast cancer patients. Definitive surgical and adjuvant treatment was carried out due to histopathological findings.

Results: In all the patients non-palpable breast lesions were detected and surgically removed under local or general anaesthesia. Tissue specimen obtained using intaroeprative hand-held ultrasound probe was easier to localize and surgically assessed, with statistically significant less tissue volume removed ($p < 0.005$). In the same time such specimen was more accurate to temporary and definitive histopathological findings. Operation time and complications rate analysis showed no difference between analyzed groups of patients. All breast cancer patients were consecutively treated according to their tumor, nodal, menopausal and hormonal status.

Conclusion: Intraoperative ultrasound guided breast surgery allows detecting of occult breast lesions with high accuracy and safety. IUSOLL method represents an exceptional alternative in surgery and thanks to its characteristics it surpasses other occult lesion localization methods. When SNB is expected, ROLL method is recommended.

No conflicts of interest

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Wide variation in mastectomy and breast conservation rate in the developed and developing world, comparative data

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Background: The rate of breast conservation surgery for breast cancer treatment has steadily expanded, ever since the pioneering work by Veronesi et al., who published the long-term results of the first randomised trial 1985–1987. Subsequently two systematic reviews, one involving six randomised trials and the second a meta-analysis of nine randomised trials, confirmed the oncological safety and survival equivalence of breast conservation to mastectomy. Many studies have shown that breast conservation surgery (BCS) results in lower level of psychological morbidity and in improved body image.

There is wide variation in mastectomy rate even in the developed world. The application of neoadjuvant chemotherapy therapy and endocrine therapy, as well as oncoplastic techniques, has further expanded the role of BCS safely. The reason for this variation in practice is multiple such as surgeon-related variables and preferences, tumour and patient related variables making mastectomy the safest option, demographical factors such as the availability and distance to the nearest radiotherapy facility and surveillance mammography/breast MRI, etc.

Some or all of the above mentioned reasons are responsible for the evident differences in mastectomy rate. However there is no escaping the fact that surgeons' ignorance of the survival equivalence of BCS is also to blame in 100% mastectomy rate in the developing world.

Material and Methods:

Total numbers of patients with breast cancer presented to IRNUM = 418
Patients presented after mastectomy and subsequently had adjuvant therapy = 263
Patients presented with metastatic disease = 103
Patients presented with inoperable locally advanced disease = 52

Comparable figures from an average District General Hospital in the UK (2011) show that out of a total number of 255 breast cancer patients, both screen detected and symptomatic, 197 patients had surgery as initial treatment: mastectomy (with or without immediate reconstruction) 45 (29%), BCS 152 (71%).

Results: A one hundred percent mastectomy rate at a tertiary referral centre with reasonable facilities for imaging and adjuvant therapy is unacceptable. Although a sizeable proportion of patients present at an advanced stage in developing countries, surgeons' ignorance of survival equivalence of BCS is also to blame.

Conclusion: Breast Cancer organizations such as European Society of Surgical Oncology, World Oncology Forum, British Association of Surgical Oncology, and medical Royal colleges etc, are doing a great service to humanity by organising Breast cancer conferences around the world and sponsoring fellowships from the developing world. More targeted inclusions of the leading surgeons and clinical oncologists in these activities in the developing world will further improve the clinical outcome and enhance the

psychological and physical wellbeing of these, not so fortunate patients around the world.

No conflicts of interest

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Clinicopathologic tumour characteristics of triple negative breast cancer disease: An 8-year experience from a single surgical breast cancer unit

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Background: Triple negative breast cancer (TNBC) represents a subtype of breast cancer characterized by lack of expression of ER, PR and HER2. TNBC is disreputable for its poor prognosis due to the high rate of relapse and is particularly being targeted for challenging therapeutic strategies. This study aims to describe the clinicopathologic tumor characteristics and the recurrence time and patterns of a large study population of TNBC patients.

Materials and Methods: A retrospective analysis was conducted based on medical records from consecutive breast cancer patients treated during 2006–2013 in our surgical breast cancer unit. TNBC patients' records were identified and their pathological and clinical data were retrieved and analyzed. Statistical significance was considered at $p < 0.05$.

Results: Out of 3,100 consecutive breast cancer patients, 277 (8.9%) patients were identified with TNBC. The median age at diagnosis was 61 years (range: 25−91). 88.8% of the patients had T1 and T2 tumor size. Breast conservation surgery was offered to 57.7%, simple mastectomy to 7.6% and modified radical mastectomy to 34.3% of the patients. Out of 241 patients who received axillary dissection, 37.8% were found to have axillary involvement. The median time to recurrence was 18 months. Metastatic disease occurred in 12.6%: 41% had locoregional relapse and 59% distant metastasis. No statistically significant correlation was found between premenopausal and postmenopausal women concerning tumor size, lymph node involvement, tumor grade or recurrence. Expression of Ki-67, with a cutoff of 14%, was significantly higher in grade III tumors ($p = 0.003$). Comparing the clinical parameters of patients with or without axillary lymph node involvement, tumor size was observed to be significantly higher in the node positive group ($p < 0.001$) but there was no difference in age ($p = 0.314$), tumor grade ($p = 0.462$), ki-67 index expression ($p = 0.064$) and recurrence rate was similar between these two groups ($p = 0.368$).

Conclusions: TNBC remains a challenging field in breast cancer management due to the unfavorable clinicopathologic features and prognosis, as being confirmed in our large TNBC study population. All the classical prognostic parameters are insufficient to evaluate the prognosis of TBNC indicating that the high percentage of recurrence is due to the biology of this type of cancer.

No conflicts of interest

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The use of isotope injections in sentinel node biopsy for breast cancer: A comparison of the one day and two day protocols

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Background: Sentinel nodes (SNs) can be mapped for biopsy using a pre-operative technetium-99 isotope injection. For convenience, isotope is injected either on the day of surgery (1-day protocol) or the day before (2-day protocol). In this retrospective cohort review we aim to determine relative efficacy of the two protocols in terms of numbers and type of nodes removed.

Methods: Electronic biopsy histopathology for all patients who underwent unilateral sentinel node biopsy between March 2012 and March 2013 in a single centre was reviewed. The number of SNs, non-sentinel nodes (NSNs) removed and node pathology (macrometastases/micrometastases/isolated tumour cells [ITC]) was compared in the two protocols.

Results: Of 462 patients identified, 270 had 1-day and 192 had 2-day protocol. Median (range) number of SNs biopsied was higher for the 1-day than the 2-day protocol [2 (0−6) and 1 (0−11) respectively, $p = 0.08$*]. Median (range) number of NSNs was the same for 1- and 2-day protocols [0 (0−6) and 0 (0−7) respectively, $p = 0.07$*). Total number of nodes was the same for both protocols [2 (0−7) and 2 (1−11) respectively, $P = 0.7$*].

Seven NSN biopsies contained macrometastases, of which 5 were in patients with metastases in the SN.

	ITC	Micrometastases	Macrometastases
1-day (n = 270)	3 (1%)	5 (2%)	34 (13%)
2-day (n = 192)	3 (2%)	6 (3%)	25 (13%)
*P**	0.7	0.5	0.5

*Mann–Whitney *U* test.

Conclusions: Although there is a possible trend for more SNs and less NSNs to be removed with the 1-day protocol, this is unlikely to have clinical significance.

No conflicts of interest

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The BRAVO (Breast Reconstruction and Valid Outcomes) Study − A multi-centre consensus process to improve the quality of outcome reporting in reconstructive breast surgery by generating a core outcome set

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Introduction: Appropriate outcome selection is essential if research is to guide decision-making and inform policy. Systematic reviews evaluating the clinical, cosmetic and patient-reported outcomes of breast reconstruction, however, have demonstrated marked heterogeneity of outcome reporting, limiting data synthesis and risking outcome reporting bias. Standardising end-points by developing and using core outcome sets − an agreed minimum set of outcomes that should be measured and reported in effectiveness studies − is one way by which outcome reporting may be improved.

We report the results of the BRAVO (Breast Reconstruction and Valid Outcomes) Study which aimed to use a scientifically rigorous Delphi consensus process to develop a core outcome set for reconstructive breast surgery.

Methods: A questionnaire was developed from a long list of 148 outcomes generated from literature reviews and qualitative work. The list was categorised into 34 domains in six groups (early and late complications; symptoms; psychosocial issues; practical issues and cosmesis) and each domain operationalized into a questionnaire item.

The questionnaire was used in a Delphi process which involves sequential completion of questionnaires with anonymised group feedback to allow items to be re-prioritised in light of opinions from others.

Key stakeholders were identified as patients, surgeons and specialist nurses who were purposively sampled to ensure a breadth of perspectives. Each participant was sent a questionnaire and asked to prioritise each outcome on a nine-point Likert scale from 1 (not important) to 9 (extremely important).

Participants were then sent a second questionnaire containing feedback on scores from the first round in which they were asked to re-prioritise outcomes based on the feedback received to identify the seven most important items to include in a core outcome set.

Results: 303 of the initial 590 questionnaires were returned (215/434 patients and 88/156 professionals) giving a response rate of 51.4%.

Patients had a median age of 54 years(range 29−76) and had undergone a full range of reconstructive procedures. The professional group included 40 breast and 21 plastic surgeons and 20 specialist nurses.

Initially, patients and professionals prioritised similar outcomes, but areas of discrepancy existed. 193 (63.7%) participants re-prioritised outcomes based on feedback from round 1. Seven outcomes were confirmed as being consistently most important to all stakeholders. These included early complications; normality; quality of life; patient-reported cosmetic outcome and patient's cosmetic satisfaction.

Conclusions: The BRAVO Study has used robust Delphi methodology to identify the outcomes that matter most to patients and professionals to generate a core outcome set for reconstructive breast surgery. Consensus meetings are needed to ratify these outcomes and future work will be required to determine how these vital outcomes may best be assessed.

No conflicts of interest