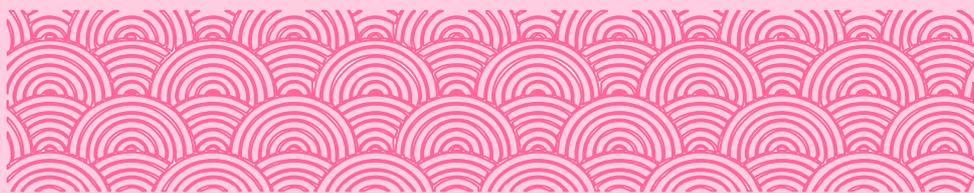


Northwest Breast Research Collaborative Annual Report

April 2017



Northwest Breast Research Collaborative Committee

Chairman	Rebecca Wilson (Teasdale)	Vice chair	Lay In Lim
Secretary	Laura Ballance	Webmaster	Rebecca Fish
Consultant	Cliona Kirwan,		
Mentors:	James Harvey, Julia Henderson		

Contact Us

Website

<https://nwresearch.org/breast-subgroup/>

The NWRC Breast subgroup website contains contact details for the committee, latest news and updates along with summaries of all our projects. It is maintained by the NWRC webmaster with domain registration kindly paid for by the North West Surgical Trials Centre.

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Annual Report

Annual report was designed and compiled by Rebecca Fish with contributions from NWRC committee and all project leads

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Implant Infection Prophylaxis Study

Contributors

Lead: Julia Henderson

Contributors & Sites: Nicola Barnes, Anita Hargreaves, Julia Henderson (UHSM), Sue Hignett (Chester), Meiju Huang, Sandhir Kandola (Bolton), Adrian McKenna (Aintree), Mandana Pennick, Matthew Rowland (UHSM), Ashley Topps (Chorley), Rebecca Wilson (Wigan),

Background

Infective complications following breast implant surgery are difficult to treat and may lead to explantation. A range of different precautions are undertaken to reduce this risk. The ABS/BAPRAS Oncoplastic Breast Reconstruction guidelines for best practice lay out quality criteria and make recommendations, however there is little level one evidence to support most precautions.

Aims

To establish what interventions are regularly undertaken to prevent infection during implant based surgery, whether these varied across units, were applied consistently and whether the recommendations in the ABS/BAPRAS Oncoplastic guidelines were followed.

Methods

Multicentre covert surveillance. Data was collected prospectively in real time during breast implant surgery over an 11- month period, within seven units.

Results

From seven NHS breast units, 121 implant procedures were assessed in 94 patients under the care of 22 consultant surgeons. The commonest procedure was immediate reconstruction (58%, 70/121). All patients were MRSA (but not MSSA) screened. Antibiotics were given at surgery in all cases, 92% (85/94) received postoperative antibiotics. Other precautions included: closed glove technique (67%, 63/94), door signs to reduce theatre traffic (72%, 68/94) glove changing prior to implant handling (98%, 119/121), laminar air flow theatres (55%, 52/ 94), disposable drapes (94%, 88/94) and gowns (74%, 70/94) and cavity washing (89%, n=108/121) Among the 14 consultants assessed on more than one procedure (range 2-22, median 5), only one consistently used exactly the same precautions when siting an implant.

Conclusion

Considerable inter-surgeon, and more surprisingly, intra-surgeon variability of infection-prophylaxis measures exists amongst surgeons. The introduction of an infection prevention checklist for all breast implant procedures could be used to improve the reliability with which these precautions are undertaken.

Output

Publications

Infection prophylaxis for breast implant surgery - could we do better? – accepted in Eplasty

Abstracts

Covert surveillance of infection prophylaxis measures applied during implant surgery

Henderson J, Kandola S, Hignett S, Teasdale R, Topps A, Kirwan CC

Eur J Surg Oncol EJSO 2015; 41(6): S60.

Poster Presentation

Covert surveillance of infection prophylaxis measures applied during implant surgery

Henderson J, Kandola S, Hignett S, Teasdale R, Topps A, Kirwan CC

Association of Breast Surgery 2015

Infection prevention in breast implant surgery – A review of the surgical evidence, guidelines and a checklist

Contributors

Steering Committee: Simon Barr & Ashley Topps

Contributors: Simon Barr, Ashley Topps, Nicola Barnes, Julia Henderson, Sue Hignett, Rebecca Wilson, Adrian McKenna, James Harvey, Cliona Kirwan

Background

As a result of increasing use of implant-based breast reconstruction, complications such as infection are being encountered more frequently. Surgical Site Infections (SSIs) cause morbidity for the patient, can lead to capsular contracture or implant loss and are costly to healthcare systems. National Guidelines suggesting methods to reduce SSI related complications have been produced, but are limited in the scope of interventions covered and underlying evidence presented.

Aims

To present a summary of the available evidence for implant infection prevention strategies

To give pragmatic recommendations for infection prevention strategies as a guideline for implant-based breast reconstruction

Methods

We performed a literature review encompassing a wide variety of possible SSI prevention strategies. We aimed to present summaries of the available evidence and give pragmatic recommendations as to their validity to use as guidelines for infection prevention strategies for implant-based breast reconstruction.

Results

A lack of high quality data relating to the benefit of SSI prevention strategies in implant-based breast reconstruction exists. Many papers relate to orthopaedic implant surgery, or clean surgery in general. Following review of the evidence, sufficient data exists to support use of perioperative antibiotics at implant-based breast reconstruction, with continuation for an extended period in "high risk" patients. Alcohol containing skin preparations should be used over aqueous solutions. Laminar air flow use is suggested. Theatre traffic should be kept to a minimum, as should duration of operative procedure. The implant pocket should be washed prior to implantation. Double gloving and conductive warming are also endorsed.

Conclusion

We have produced a perioperative "Theatre Implant Checklist" for SSI prevention in implant-based breast surgery, with a set of pragmatic up to date guidelines, which allows the reader to evaluate the evidence upon which our recommendations are based.

Output

Publications

Infection Prevention in Breast Implant Surgery – A review of the surgical evidence, guidelines and a checklist Barr SP, Topps AR, Barnes NLP, Henderson J, Hignett S, Teasdale RL, McKenna A, Harvey JR, Kirwan CC *European Journal of Surgical Oncology (EJSO)* 2016; 42(5): 591-603 doi: 10.1016/j.ejso.2016.02.240

Abstracts

Infection Prevention in Breast Implant Surgery – A Novel Intraoperative Checklist and Review of the Evidence Barr SP, Topps AR, Barnes NLP, Henderson J, Hignett S, Teasdale RL, McKenna A, Harvey JR, Kirwan CC *Eur J Surg Oncol EJSO* 2016; 42(5): S50

Presentations

Infection Prevention in Breast Implant Surgery – A Review of the Surgical Evidence, Guidelines and a Checklist Barr SP, Topps AR, Barnes NLP, Henderson J, Hignett S, Teasdale RL, McKenna A, Harvey JR, Kirwan CC - *Mammary Fold Academic & Research Study Day* 2016

Surgical Site Infection and Implant-Based Breast Reconstruction - A Review of the Evidence Barr SP, Topps AR, Barnes NLP, Henderson J, Hignett S, Teasdale RL, McKenna A, Harvey JR, Kirwan CC - *iBRA2 Study Day* 2015

Poster Presentations

Infection Prevention in Breast Implant Surgery – A Novel Intraoperative Checklist and Review of the Evidence Barr SP, Topps AR, Barnes NLP, Henderson J, Hignett S, Teasdale RL, McKenna A, Harvey JR, Kirwan CC - *Association of Breast Surgeons* 2016

Infection Prevention and Breast Implant Surgery - A Review of the Surgical Evidence and Guidelines Barr SP, Topps AR, Barnes NLP, Henderson J, Hignett S, Teasdale RL, McKenna A, Harvey JR, Kirwan CC - *National Research Collaborative Meeting* 2015

Explantation in implant-based breast reconstruction study

Contributors

Steering Committee: Sandhir Kandola, Matthew Rowland, Rebecca Wilson

Contributors & Sites: Julia Henderson (UHSM), David Riding (Stepping Hill), Saleem Mastan (Wigan), Matthew Rowland (UHSM/Burnely), Sandhir Kandola (Bolton/Burnely), Rebecca Wilson (Wigan)

Background

Over the past 15 years there has been a significant increase in women undergoing breast reconstruction, especially immediate reconstruction. In 2012 approximately 85% of all immediate breast reconstructions performed in the UK were implant-based.

Aims

To assess outcomes after implant based breast reconstruction

Identify risk factors for post-operative complications, implant loss and revision surgery

Methods

Retrospective case note review of all implants inserted between 1st January – 31st December 2012 after mastectomy in 5 centres in North West.

Results

Implant loss was significantly higher in smokers, compared to those not smoking at the time of reconstruction (18% vs. 5%, $p=0.002$). Almost one third of those prescribed additional courses of antibiotics beyond the period of prophylaxis lost their implant, compared to 2% of those not requiring additional antibiotics ($p<0.005$). Positive microbiology was associated with a 55% implant loss rate. However, regardless of the result, in patients where a wound swab was sent there was a 50% implant loss rate. There was a higher rate of implant loss in patients who presented with skin changes at the first post-operative visit compared to those who did not (17% vs. 4%, $p=0.007$). A major skin change at the first post-operative visit did not increase implant loss over minor skin change ($p=0.89$), whereas a major breakdown was more likely to lead to implant loss than minor wound break ($p=0.008$).

Conclusion

Reconstruction is now offered to an increasingly diverse range of women. Predicting who is at high risk of breast implant loss remains challenging, but prediction of loss allows for appropriate counseling and the option of attempting a salvage strategy.

Output

Abstracts

Does contralateral synchronous surgery delay adjuvant therapy for women undergoing immediate implant based reconstruction? Teasdale RL, Mastan S, Rowland MP, Kandola SK, Henderson JR, Kirwan CC, Harvey JR - Eur J Surg Oncol EJSO 2016; 42(5): S43

Are National ABS/BAPRAS targets being met in the North West of England in implant based breast reconstruction? Mastan S, Teasdale RL, Rowland MP, Kandola SK, Henderson JR, Kirwan CC, Harvey JR - Eur J Surg Oncol EJSO 2016; 42(5): S42

Expanding the scope of implant based reconstruction; good results can be achieved in challenging and high-risk patients Rowland MP, Kandola SK, Teasdale RL, Harvey JR, Henderson JR, Riding DM, Kirwan CC - American Association for Cancer Research

Presentations

Outcomes for Dermal Sling reconstruction may be superior to those using Acellular Dermal Matrix in a multi-centre cohort Rowland MP, Teasdale RL, Kandola SK, Harvey JR, Henderson JR, Riding DM, Kirwan CC - Oncoplastic & Reconstructive Breast Surgery 2015

Expanding the scope of implant based reconstruction; good results can be achieved in challenging and high-risk patients Rowland MP, Teasdale RL, Kandola SK, Harvey JR, Henderson JR, Riding DM, Kirwan CC - Oncoplastic & Reconstructive Breast Surgery 2015

Poster Presentations

Are National ABS/BAPRAS targets being met in the North West of England in implant based breast reconstruction? Mastan S, Teasdale RL, Rowland MP, Kandola SK, Henderson JR, Kirwan CC, Harvey JR - Association of Breast Surgeons 2016

Does contralateral synchronous surgery delay adjuvant therapy for women undergoing immediate implant based reconstruction? Teasdale RL, Mastan S, Rowland MP, Kandola SK, Henderson JR, Kirwan CC, Harvey JR - Association of Breast Surgeons 2016

Expanding the scope of implant based reconstruction; good results can be achieved in challenging and high-risk patients Rowland MP, Kandola SK, Teasdale RL, Harvey JR, Henderson JR, Riding DM, Kirwan CC - San Antonio Breast Cancer Symposium 2015

Future

Submission to peer reviewed journal

CURRENT PROJECTS

Patient Involvement Project

Contributors

Study Leads: George Boundouki & Julian Henderson

Steering Committee: Cliona Kirwan (Consultant mentor & grant co-applicant), James Harvey (Consultant mentor & grant co-applicant), Julia Henderson (Consultant mentor & grant co-applicant), Ashley Topps (Registrar in breast surgery and grant co-applicant), George Boundouki (Registrar in breast surgery and Steering committee chair), Paula Duxbury (Psychologist), Gavin Daker-White (Qualitative research expert), Julie Wray (Patient representative), Laura Balance (Core surgical trainee), Rajiv Dave (Registrar in breast surgery), Mustafa Khanbhai (Registrar in breast surgery), Kate Williams (Registrar in breast surgery)

Background

Historically, clinical research ideas are generated by clinicians or academic researchers based on areas of perceived needs and are judged on scientific merit rather than on relevance and importance of outcomes to end users (Staley and Hanley 2008). More recently, the importance of Patient and Public Involvement (PPI) in trial design and management has been recognised. The benefits include improved relevance to patients, enabling wide participation and raising awareness of research (Nasser *et al.* 2013). The involvement of end users in research has been extended further with the concept of 'user researchers'. Such projects allow the end users of a service, those for whom the outcome of the research will have the greatest impact, to conduct the research themselves.

Breast Cancer Campaign (BCC) recently funded a Gap Analysis (Eccles *et al.* 2013) to determine areas of research need in breast cancer. This was performed by over 100 internationally recognised specialist breast cancer scientists, clinicians and healthcare professionals. Ten major knowledge gaps were identified. However, no PPI was included in this gap analysis. A further breast surgery Gap Analysis is planned. It is recognised that patients and clinicians have different research priorities; therefore the relevance of PPI to any gap analysis is clear (Grant-Pearce *et al.* 1998).

Aims

The primary aim of this study is to identify the public's priorities for breast cancer research.

The secondary aims are to study how the public's priorities relate to clinicians' and academics' priorities and to provide a guide for future studies in breast cancer.

Methods

Undertake a series of listening events. Women who have had breast cancer treatment and healthy non-cancer women, those who have been involved in the care of a loved one who has battled breast cancer would also be welcome to participate. A questionnaire will then require respondents to rank the themes identified from the listening events in order of priority. This questionnaire will be distributed to a range of subjects including public, patients, breast cancer clinicians and non-clinical scientists to compare their priorities of the research themes.

Output

Grants

Association of Breast Surgeons 2015

Abstracts

A novel approach to obtaining funding for patient and public participation in research Boundouki G, Dave R, Ballance L, Teasdale RL, Henderson J, Harvey JR, Kirwan CC - Eur J Surg Oncol EJSO 2016; 42(5): S28

Presentations

Setting up a public involvement study Boundouki G, Henderson J, Topps A, Khanbhai M, Dave R, Ballance L, Williams K, Harvey JR, Kirwan CC - Mammary Fold Academic & Research Study Day 2016

Non-traditional approach to obtaining funding for patient and public participation in research Boundouki G, Dave R, Ballance L, Teasdale RL, Henderson J, Harvey JR, Kirwan CC - National Research Collaborative Meeting 2015

Poster Presentations

A novel approach to obtaining funding for patient and public participation in research Boundouki G, Dave R, Ballance L, Teasdale RL, Henderson J, Harvey JR, Kirwan CC - Association of Breast Surgeons 2016

Funding patient and public participation in research: an alternative to traditional sources Ballance L, Boundouki G, Dave R, Teasdale RL, Henderson J, Harvey JR, Kirwan CC - Associations of Surgeons in Training 2016

Progress

The first two listening events have been carried out with a further planned imminently and recruitment continues for further events.

Returning to Activities of Daily Living after Breast Surgery

Contributors

Steering Committee: Laura Balance, Rebecca Wilson

Aims

To gain an idea of how long it takes patients to return to activities after undergoing mastectomy +/- various forms of reconstructive breast surgery

Methods

Questionnaire given to patients to fill in post-operatively detailing the timings of carrying out an activity for the first time after their mastectomy +/- reconstruction

Current progress

Patient involvement in questionnaire design and ethics application in progress

FUTURE PROJECTS

Neoadjuvant therapy audit (in collaboration with the National Collaborative)

Steering group: Ian Whitehead

Progress: National audit will overtake this project. Ian has joined the steering committee and will ensure the collaborative can contribute where possible.

Negative Pressure Dressings & Breast Surgery: a patient and professional survey:

Steering group: Julia Henderson, Matthew Rowland

Progress: on-hold at present. Looking for breast trainees in Mersey who may wish to take this forward.

Seroma after breast surgery

Steering group: Lay Lim

Progress: on-hold at present, looking for more members to take this forward.

Predicting post mastectomy radiotherapy

Steering group: Shazia Hafiz

Progress: on-hold at present, looking for more members to take this forward.