

Background

Mastitis is a breast infection that affects as much as a third of breastfeeding women (1), up to 11% of whom develop a complication of lactational breast abscess (2). Non-lactational mastitis and breast abscesses are infrequent (2, 3). Management of mastitis includes alleviation of milk stasis and antibiotics (1, 4). Ultrasound-guided needle aspiration is the recommended method of treatment for breast abscesses (5) with incision and drainage reserved for complicated, large or necrotising abscesses (6).

Despite guideline recommendations, there is evidence to suggest significant variation in practice, particularly concerning antibiotic prescribing, rates of incision and drainage and length of inpatient treatment. At least 40% of women are prescribed inappropriate antibiotics (6, 7) and one in three women are admitted for inpatient treatment (6). However, the rate of incision and drainage is of particular interest as the incidence differs dramatically between studies from 1% (6) to over 85% (8). Inappropriate antibiotic prescribing not only delays treatment but can result in significant infection and hospital admission. Unnecessary operative intervention carries increased risk of cosmetic disfigurement and has significantly higher cost, compared to outpatient ultrasound-guided aspiration. Unnecessary hospital admission is not only wasteful of limited NHS resources but is very disruptive to mother and baby. Considering that the majority breast surgeons are no longer participating in the on-call rota and the acute presentation of primary breast infections, we hypothesise that such variation in practice indeed exists across the UK and Ireland where patients are treated by the non-specialist general surgeons. However, in order to improve current practice, we need to confirm our hypothesis.

Aims and Objectives

The aim of the MAMMA study is to describe the current practice in the management of mastitis and breast abscesses in the UK and Ireland and to provide recommendations for best practice.

The objectives of the MAMMA study are:

1. Understand patient treatment pathways and patterns of sub-speciality involvement
2. Identify variation between different centres, specifically in terms of antibiotic prescribing, rate of operative versus radiological management, waiting time to ultrasound scan, rate of inpatient versus outpatient treatment, length of hospital stay, rate of follow-up by breast surgeons, number of outpatient appointments
3. Generate data to improve current guidelines on the management of mastitis and breast abscess
4. Determine the feasibility of ongoing prospective national annual re-audit

Study design and Methodology

National trainee collaborative will be established with the assistance of the Mammary Fold Academic and Research Committee and will be the driving force behind this project. The trainee collaborative will be supported by the academic clinicians, MAMMA Steering Committee and methodologists from Imperial College London. All study data will be collected and managed using REDCap electronic data capture tool.

This study will be carried out in 3 phases:



PHASE 1: National Practice Survey

- *Aim: to gain further understanding into current care pathways and sub-specialty involvement in the management of mastitis and breast abscess*
- Will be conducted by the local trainee leads in collaboration with lead supervising consultants



PHASE 2: Prospective Audit of the Management of Mastitis and Breast Abscess



- *Aim: to gain further understanding into the management of patients with mastitis and breast abscess through real-time data*
- All participating centres will be required to register this audit locally
- **Inclusion Criteria:**
 - Female >16 years of age
 - symptoms of mastitis or breast abscess
- **Exclusion Criteria**
 - male patients
 - underlying pathology of breast cancer
 - breast surgery within 90 days of presentation
 - breast implant in situ on the affected side
- Areas for improvement will be identified
- New guidelines will be developed and disseminated to all participating sites, as well as presented at national and international conferences



PHASE 3: Prospective Re-audit of the Management of Mastitis and Breast Abscess



- *Aim: to ensure maintenance of good practice in the management of mastitis and breast abscess following implementation of the new guidelines*

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