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A multidisciplinary team approach minimises prophylactic mastectomy rates

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Abstract

Background: Prophylactic mastectomy (PM) has become increasingly common but is not without complications especially if accompanied by reconstructive surgery. In patients with sporadic unilateral breast cancer, contralateral PM offers no survival advantage. Multidisciplinary team (MDT) communication and interaction may facilitate shared decision-making and curtail PM rates. The aim of this study was investigate the effect of a regional MDT meeting on PM decision-making.
Methods: We conducted an observational study involving retrospective review of prospectively recorded MDT meeting records for a 151 patient requests for PM from 2011 to 2014. Final MDT decisions were recorded as PM 'accepted', 'declined' or 'pending'. For MDT sanctioned requests, the factors justifying PM were recorded. Where PM was declined, justification for MDT refusal was sought and recorded.
Results: Approximately half of all requests for PM have been upheld (53.0%) and 1/3 of requests have been declined (32.5%). Of those declined, low risk of contralateral breast cancer versus relatively high risk of systemic relapse were commonly cited as justification for PM refusal (45.7%). A proportion of patients who initiated PM discussion subsequently changed their minds (19.6%), or failed to attend clinic appointments (6.5%). Some patients were deemed medically unfit for complex reconstructive surgery (13%), or were declined on the basis of an apparent cosmetic drive for surgery (6.5%), concerns regarding depression or anxiety (2.2%) and/or if family history could not be substantiated (6.5%).
Discussion: MDT meetings facilitate cross-specialty interrogation of requests for PM, minimise unnecessary surgery and restrict PM to those likely to derive maximum benefit.

Keywords: Risk reducing; Prophylactic; Mastectomy; Contralateral; Breast cancer; Multidisciplinary

Introduction

In the past two decades the number of contralateral risk reducing mastectomies performed in the United States (USA) has increased[1–9] despite the fact that contralateral breast cancer (CBC) rates have decreased.[10,11] In contrast to reports from other European centres,[12] rates of bilateral mastectomy have increased in the United Kingdom (UK), without an increase in bilateral breast cancers[13] which implies that UK trends in contralateral prophylactic mastectomy (CPM) may parallel those in the USA. At our regional reconstructive and cancer centre, we observed a simultaneous increase in referrals for genetic testing (the

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"Jolie effect") and staged requests for either CPM in patients with unilateral sporadic breast cancer and/or bilateral mastectomy in mutation carriers with a personal history of breast cancer. Given that the risk of CBC in patients with sporadic breast cancer is relatively low[14,15] and that CPM offers little or no advantage in terms of overall and disease free survival,[15–23] clinicians have become concerned about acceding to all requests for CPM. This is compounded by the knowledge that patients' decisions are often motivated by fear of recurrence[24] or misperceptions regarding the survival benefits of CPM,[25] and that CPM is neither costless[26,27] nor complication free, especially if reconstructive surgery is sought.[28–32] This has led to calls for greater scrutiny in assessing requests for prophylactic mastectomy (PM), in order to reduce the costs and morbidity of unnecessary surgery.[33,34]

Decisions regarding CPM in the context of prior breast cancer are, by definition, intrinsically multidisciplinary. In response to the rising referral rates, benefits of interdisciplinary team interactions[35,36] and desire to curtail unnecessary CPM rates, a regional multidisciplinary team (MDT) meeting was established to scrutinise referrals for PM taking patients' motivations for surgery on board. The aim of the current study was to review the benefits of a regional MDT in terms of clarity in PM decision-making. Whilst protocols for MDT interaction have been previously published,[35] they do not focus on improvements in decision-making, nor clarify the grounds on which requests for PM may be declined.

Patients and methods

Risk reducing mastectomy multidisciplinary team and processes

A regional quarterly MDT meeting was established in 2011 to discuss all requests for PM from patients referred to our centre, including patients with known risk mutations with or without a prior history of cancer, and patients with a prior history of breast cancer but without known risk mutations. MDT members encompass a breadth of specialties that include oncology, reconstructive surgery, cancer genetics and psychologists, ensuring a diverse skill set. Each MDT member reviews the patient in a clinic setting outwith of the meeting, and any member of the team can place a patient's name on the list for discussion by faxing a written proforma to the RRM-MDT co-ordinator. Patients' are only discussed at MDT once all relevant members have reviewed them on at-least one occasion and the meeting is used to raise and resolve clinical concerns. The patient's motivations for PM, details of family members affected, and results of genetic tests are discussed. MDT decisions are carefully documented such that the clinical justifications for acceptance or refusal of PM requests are transparent. Prior to MDT "sign off' all patients are required to attend Breast Reconstruction Awareness (BRA group) meetings, at which, women considering risk reducing surgery discuss any concerns with nurse specialists and patients who have been through similar experiences (http://breastreconstructionawareness.org.uk). Patients are included in the decision making process even though they are not physically present at the MDT. Team decisions broadly classified under three headings (i.e. "accepted", "pending further investigation", "declined") are discussed with patients in clinic by core MDT members. Some decisions are dependent on obtaining more information (e.g. confirmation of family history of cancer or further clinical review, psychology assessment), and clinicians' work with patients to achieve resolution and/or re-discuss the case if required. If the MDT declines a request for PM, then psychological support (e.g. anxiety management) and relevant clinical tests (e.g. surveillance) are provided. In the latter scenario it is unusual for a patient to then receive PM unless clinical circumstances change (e.g. more relatives diagnosed with cancer, thus modifying risk).

Benchmark criteria for clinical decision making

MDT decisions are arrived at through inter-disciplinary discussion and debate against objective and subjective criteria. Current family history guidance from the National Institute for Care and Health Excellence (NICE) suggests that patients with a high lifetime risk of developing breast cancer (defined as 30% or more) should be have a discussion regarding the benefits of risk reducing surgery.[37] Unaffected patients with proven genetic mutations typically fulfil these criteria and decisions are often more straightforward but other management options such as chemoprophylaxis and surveillance are also discussed. The same criteria are extended to patients with a prior history of unilateral BC, assuming CBC risks of approximately 0.7%/year risk of for patients with sporadic breast cancer and 3%/year for patients with proven genetic mutations. Certain patients with sporadic breast cancer may also meet these criteria if multiple family members are affected, even in the absence of a known high-risk mutation. Patients not fulfilling these objective criteria are discussed in detail but risk-reducing surgery is declined unless another valid indication is identified such as anxiety related to the challenges of imaging surveillance (e.g. frequent unidentified bright objects on MRI leading to repeat biopsies) or desire for reconstructive symmetry. Patients in whom family histories cannot be substantiated are declined risk-reducing surgery. Requests for CPM in breast cancer patients are contextualised with respect to prognosis and risk of distant relapse from the index cancer and those deemed at high risk of distant relapse are declined. Patients seemingly motivated entirely by cosmesis (i.e. incorrectly perceiving PM as a vehicle for augmentation), and those with confirmed psychoses are also declined surgery. Finally, patient's who repeatedly failed to attend clinic appointments and those considered medically unfit are often declined complex reconstructive surgery.