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Improving breast cancer multidisciplinary meetings through streamlining with protocol-based management

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ABSTRACT

Objectives Multidisciplinary meetings (MDMs) are part of standard of care for patients with cancer. Streamlining is essential for high-quality care and efficiency. This study evaluated the feasibility of implementing a protocol to remove patients with benign breast disease from discussion at the MDM.

Methods A prospective review of 218 MDMs evaluated patients with benign breast disease over 22 months. This was followed by a protocol implementation phase over 54 MDMs (6.5 months). Patients meeting specific criteria were excluded from discussion.

Results On average, each MDM consisted of 37 patients, 34.2% of whose conditions were benign and potentially could have been removed from discussion. The implementation phase showed 708/2248 patients (32.5%) were benign of which 631 cases (89%) met the eligibility criteria and were removed from the MDM list allowing more time for discussion of complex cases.

Conclusion Implementing a protocol can safely exclude patients with benign disease from MDM discussion.

INTRODUCTION

Multidisciplinary meetings (MDMs) are the gold standard for recommending care for patients with cancer.[1] Cancer care has become increasingly complex, requiring sophisticated multidisciplinary contribution.[2] With rising number of cases and more complex treatments, breast MDMs are challenging to deliver. Due to the number of patients with benign breast lesions (BBL), time is limited to have constructive discussions on complex cases.

The National Health Service (NHS) pressures have been heightened by the SARS-CoV-2 pandemic. Services must adapt to manage increased demands.[3] MDMs are resource-consuming clinical sessions. As pressure on services increases, MDMs may become unsustainable.

Streamlining the MDM will facilitate focus on patients with cancer to ensure high-quality care. One way to achieve this is to reduce the number of patients discussed by applying protocol-based decisions.

At Guy's Hospital, the MDM list is populated by the cancer coordinator from referrals on the electronic patient record system by any healthcare professional and is available 2 to 3 days prior to the MDM. Patients undergoing triple assessment are referred from radiology records and all postsurgical patients are referred from surgical lists. All disciplines separately prepare their contribution for each patient prior to the meeting. There is no specific joint pre-MDM preparation. The surgical pre-MDM preparation is undertaken by the senior surgical clinical fellow (SCF) and decisions signed off by the attending consultant surgeon before the MDM. Therefore, streamlining at the pre-MDM preparation point may be beneficial.

BBLs encompass a broad range of pathologies with an estimated prevalence of 50%.[4] Not all require biopsy at the time of triple assessment in a breast clinic although, if a biopsy is warranted, current guidelines recommend discussion of the results postbiopsy at the breast MDM.

This study aimed to review the outcome of implementing a protocol to remove patients with BBL to streamline the breast MDM at a tertiary academic NHS hospital.

METHOD

A protocol was developed including a range of BBLs (online supplemental appendix 1). A total of 17 benign conditions were identified. A literature search was conducted using Google Scholar, PubMed and the Cochrane database. The search considered only studies that were systematic reviews, meta-analyses or randomised controlled trials published up

Table 1 This shows the percentage of patients discussed at the MDM before and after the implementation of the protocol as per radiological and histopathological findings

Imaging (radiology)	Biopsy (histopathology)	Pre-protocol % patients discussed	Post-protocol % patients discussed
M1/U1 M2/U2	B1	100	0
M3/U3	B1	100	100
M1/U1 M2/U2	B2	100	10.9 (in cases of uncertainty)
M3/U3	B2	100	100
M3/U3	B3	100	100

Grading for radiology is as follows: M1/U1—normal, M2/U2—benign, M3/U3—uncertain. Grading for histopathology is as follows: B1—normal, B2—benign, B3—uncertain.
MDM, multidisciplinary meeting.

to and including May 2023. The search strategy was to find articles which combined the main aims of our study's protocol: benign breast disease, cancer risk, management of conditions and evidence of benign nature. Once constructed, the protocol was reviewed by senior members of the MDM. Patients deemed safe to be removed from MDM discussion as per the protocol remained at the bottom of the MDM list for record keeping and clinical governance. Safety netting of complex lesions was conducted to ensure they were discussed in the MDM. Moreover, if imaging and histopathological results were discordant, the patient was kept on the MDM discussion list. Table 1 shows the criteria met for patients removed from discussion at the MDM using the protocol.

Initially, a prospective study was undertaken, reviewing MDMs over a 2-year period, to determine the percentage of BBLs discussed. This was to assess whether it would be possible to create a protocol for BBLs that would lead to significant reduction in pressure on the MDM. The implementation of the protocol was audited over 54 MDMs. During this period, benign cases were removed by an SCF in line with the protocol and a final list was published a day before the MDM with the cases that were removed identified within the list. All cases that were removed were reviewed by a consultant breast surgeon for safety netting prior to the MDM. This was a temporary measure that ensured compliance with the protocol and provided reassurance to the SCFs of senior surgical support and clinical governance. Following this, meetings were organised for feedback from the SCFs who had used the protocol.

RESULTS

From 4 January 2021 to 13 March 2023, 8110 patients were discussed in 218 MDMs, of whom 2827 had benign lesions, either on biopsy or surgical excision. These included patients with a benign diagnosis at triple assessment who had core biopsy or postoperative surgical histopathology. On average, 37.2 patients were discussed at each of the two times weekly MDMs. From this cohort, an average 34.2% of cases discussed were benign and could potentially have been removed from discussion by the whole multidisciplinary team (MDT).

The protocol implementation audit, over 54 MDMs (6.5 months), showed that 2248 patients were discussed, of which 32.5% (708 patients) had benign results. In all, 631 (89%) cases met the eligibility criteria to be removed from the MDM list using the protocol, of whom 100% were removed before the MDM and were not discussed. On average, the number of cases discussed at each MDM decreased by 28.1% (~12 patients), saving 24 min of discussion.

A total of 77 benign cases were not removed from the MDM list, as they did not meet the eligibility criteria due to radiological/histopathological discordance. Two patients undergoing risk-reducing mastectomies were not removed when the protocol was initially trialled; the protocol was updated in the first month to include these cases.

Overall, satisfactory feedback was received from all the SCFs, expressing the protocol's clarity and ease of use. No additional time was required to apply the BBL protocol during the MDM preparation. Radiologists and histopathologists have provided positive feedback stating the reduction in the number of cases has decreased their workload during MDM preparation. In addition, all disciplines were satisfied that no MDMs over-ran, and the clinical research team acknowledged more patients were considered for clinical trials.

DISCUSSION

Implementing the BBL protocol has proved to be efficacious: 100% of cases that met the eligibility criteria were removed from discussion. Fewer MDMs over-run (with an average 17.4% reduction in the number of cases discussed) and there has been time for more discussions of complex cases, particularly in relation to potential eligibility in clinical trials. As a safety net for patients, if there is any uncertainty during pre-MDM review of the case, the patient is retained on the MDM list, after discussion with the consultant Surgeon.

SCFs are comfortable actioning the outcomes as per the BBL protocol. During MDM preparation, documentation from the initial clinic visit is taken into consideration reviewing comments such as 'large, painful, symptomatic fibroadenoma'. The SCF would discuss this patient with the consultant surgeon attending the MDM and form a management plan. However, a limitation of this study's design was that the MDM durations were not quantified pre or postintroduction of the new protocol.

Implementing a protocol such as this can successfully and safely remove benign conditions from formal discussion at an MDM. Other units may reproduce such a protocol by following similar steps, potentially using our protocol as an example (online supplemental appendix 1). Other specialty MDMs may also benefit from a similar protocol-based management approach. In addition, it is

worth considering the next step, which is to extend this process to patients with a diagnosis of early breast cancer in whom decisions may also be protocol-based.

CONCLUSION

Implementation of a protocol to remove BBLs from discussion at an MDM is a safe, effective and efficient strategy to streamline discussion at the breast MDM to allow time for discussion of complex patients and clinical trial eligibility. This should be easy to adopt across other hospital breast MDTs and it is worth considering a similar strategy in other tumour MDM discussions.

Contributors APS and KB contributed equally to this paper. AS had substantial contributions to the conception or design of the work; the acquisition, analysis, interpretation of data for the work; and drafting the work or revising it critically for important intellectual content; and final approval of the version to be published; and agreement to be accountable for all aspects of the work in ensuring that questions related to the accuracy or integrity of any part of the work are appropriately investigated and resolved. KB had substantial contributions to the acquisition, analysis, interpretation of data for the work; and drafting the work or revising it critically for important intellectual content; and final approval of the version to be published. BS had substantial contributions to the acquisition, analysis, interpretation of data for the work. ZP had substantial contributions to the acquisition, analysis, interpretation of data for the work. MA had substantial contributions to the acquisition, analysis, interpretation of data for the work. SP had final approval of the version to be published and agreement to be accountable for all aspects of the work in ensuring that questions related to the accuracy or integrity of any part of the work are appropriately investigated and resolved. AP had substantial contributions to the conception or design of the work; final approval of the version to be published and agreement to be accountable for all aspects of the work in ensuring that questions related to the accuracy or integrity of any part of the work are appropriately investigated and resolved. AP is the guarantor of this study.

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