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ORIGINAL ARTICLE

Quality assessment of decision–making in colorectal cancer multidisciplinary meetings

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Summary

Purpose: *The quality of decision-making in the colorectal multidisciplinary team (MDT) meetings can significantly affect the quality of care delivered to patients with colorectal cancer. We performed a prospective study to assess the quality of the MDT meetings in a specialized colorectal unit using an externally observational validated tool.*

Methods: *An externally validated observational tool, the Colorectal Multidisciplinary Team Metric for Observation of Decision-Making (cMDT-MODe), was used to assess the quality of clinical decision-making in 64 cases.*

Results: *Although case history information presented by the responsible surgeon was rated high (4.4/5), the quality of radiological and histopathological information regarding each patient's case which was available at the time was less adequate, scoring 3.9/5 and 3.8/5, respectively. Moreover, the precise knowledge of patients' personal views and circumstances was a field requiring further improvement. In a general overview however, the quality and extent of the available information enabled the MDT to provide a clear recommendation regarding the patients' treatment plans in 87.5% of the cases.*

Conclusions: *The cMDT-MODe tool can be used to prospectively audit the quality of clinical decision-making in the colorectal MDT meetings and highlight the fields of potential improvement.*

Key words: *cancer, colorectal, decision-making, MDT, multidisciplinary*

Introduction

The wide implementation of dedicated MDT meetings has resulted in a general improvement of clinical decision-making in colorectal cancer [1]. The constitution of these tumor boards from representatives of all the teams that will be involved in different stages of the patient's care aims to enable the acquisition of all the necessary information regarding both the features of the underlying malignancy and the patient's personal circumstances on time, in order to tailor the further treatment plan on an individual basis. It is evident that the availability of the information required, along with the members' ability to communicate efficiently and promote in a constructive way the discussion process are two factors of cardinal importance that can guarantee the smooth function of the oncological MDT meetings.

Despite the growing role of quality assurance measures in every aspects of medicine, until recently very little was done in terms of re-assuring the quality of the oncological - in particular of the colorectal - MDT meetings, whose recommendations can be regarded to a great extent as a turning point of cancer care delivery. Recognizing the lack of quality standards that should be met by the various MDT meetings, health systems have focused on the development of quality assurance and assessment strategies, with the introduction of validated observational tools to monitor the quality of the MDT meetings [2-4]. In terms of colorectal cancer, Shah and colleagues have recently published their work in this field, presenting the "Colorectal Multidisciplinary Team Metric for Observation of Decision-Making (cMDT-MODe)", which is a validated tool for assessing the quality of the colorectal MDTs; it is a modification of quality assessment tools recently implemented in

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UK nationwide audits which evaluated the quality of cancer MDTs across the country [5].

Under this rationale, we performed a prospective study using cMDT-MODe in order to measure the quality of the weekly colorectal MDT meetings held in a dedicated colorectal and peritoneal surface malignancies surgical unit.

Methods

Over an one-month period, the quality of the weekly-held colorectal MDT meetings was prospectively audited using the cMDT-MODe tool, without the MDT members being aware of the presence of this evaluation process. The assessor was a member of the surgical team, however not attached in terms of clinical practice directly to any of the participating Consultants, in order to minimize biased judgment of the individual's performance. The key features assessed were the presentation of case history, radiological and pathological information, knowledge of patients' co-morbidities and personal circumstance, adequacy of the members' contribution and the clarity of the final recommendation. The relevant audit form as based on the cMDT-MODe tool is illustrated in Table 1.

Table 1. Example of the audit form using the cMDT-MODe tool

Quality of colorectal MDTs – Audit form
Case Hx information
...../5: Fluent case Hx with salient points clear
...../3: Partial case Hx
...../1: No patient Hx
Radiological information
...../5: Radiological images, with clear information regarding staging and margins
...../3: Radiological information from report/account OR partial information about staging/margins
...../1: No provision of radiological information
Pathological information
...../5: Histopathological information with concise information regarding resection margins
...../3: Histopathological information with some information regarding resection margins
...../1: No provision of histopathological information
Contribution of MDT chair
...../5: Leadership enhancing information/presentation/discussion/decision making
...../3: Leadership not enhancing information/presentation/discussion/decision making
...../1: Leadership impeding information/presentation/discussion/decision making
Psychosocial factors
...../5: Comprehensive knowledge of patient's personal circumstances, social, psychological issues
...../3: Vague knowledge of patient's personal circumstances, social, psychological issues
...../1: No knowledge of patient's personal circumstances, social, psychological issues
Patient comorbidity
...../5: Comprehensive knowledge of patient's Hx, performance status & relevant anatomical info
...../3: Vague knowledge of patient's Hx, performance status & relevant anatomical info
...../1: No knowledge of patient's Hx, performance status & relevant anatomical info
Patient views
...../5: Comprehensive knowledge of patient's opinions/wishes regarding treatment
...../3: Vague knowledge of patient's opinions/wishes regarding treatment
...../1: No knowledge of patient's opinions/wishes regarding treatment
Contribution of members:
...../5: Articulate & precise specialty related contribution
...../3: Contribution inarticulate or vague
...../1: Nil/impedes contribution of others
Final MDT recommendation:
Y – clear recommendation about treatment / N – no or unclear recommendation

Results

A total of 64 cases of colorectal cancer patients discussed in the weekly MDT meetings during the study period were included in our prospective audit. In 100% of the cases, the patients' clinical history was presented by the colorectal surgeons, who appeared to score high in terms of providing the adequate level of background clinical information, scoring a mean 4.37/5 in the relevant section. With respect to the in-depth knowledge of the patients' co-morbidity factors, which is a specific parameter of the cMDT-MODe tool and is not generally incorporated in the clinical history section, the responsible surgeons seemed to have a gross knowledge of the concurrent co-morbidities, scoring an average of 3.35/5. However, when referring to the patient's psychosocial status, the overall scoring of the MDT was fairly average, 2.8/5, with the members not being aware of the patients' psychosocial profile in 22/64 cases. Moreover, extending to the above mentioned, the team was only fairly aware of the patients' views regarding the potential treatment plans (mean score 2.52/5), although it must be mentioned that not all surgeons had a provisional discussion with the patients in the anticipation of the pending radiological/histopathological investigations.

Furthermore, the quality of the radiological information provided on site by a Consultant Radiologist scored an average of 3.95/5. On 8/64 occasions there was no formal report of the MRI/CT scans at the time of the MDT and 2/64 patients had not undergone any of the necessary imaging essays due to failure of attending their scheduled appointments. Regarding the availability of the histopathology data, the mean score over the observation period was 3.76/5, with 14/64 histopathology reports not being finalized at the time of the MDT meeting. In terms of evaluation of the members' constructive contribution to the discussion of each case, the MDT members appeared to score high, with an average of 4.52/5; moreover, the chairs of each MDT, who on all occasions were colorectal surgeons, seemed to clearly demonstrate leadership features and enhance in a constructive way the discussion of each case. In a general overview, the MDT managed to reach a clear and concise recommendation regarding the further patients' management in 87.5% of the cases.

Discussion

Colorectal MDT meetings are the cornerstone of ensuring the accuracy of clinical decision making in defining the management of colorectal cancer patients [6]. Although the variability of backgrounds and clinical expertise of the MDT members is essential in order to reach a truly well-rounded decision, it is of paramount importance for optimizing our standards of care to regularly audit the different quality parameters that contribute to its optimal function [7-9]. As a result, the regular evaluation of the quality of the function of the colorectal MDT meetings would enable the early identification of features that could further improve the optimization of clinical decision-making and sequentially the care delivered to patients [10]. Moreover, it has been demonstrated that the lack of accurate knowledge of patients' views and personal circumstances due to inadequate preparation of the MDT, is associated with a greater chance of radically altering the final treatment plans in colorectal cancer [11].

For this reason, the significance of standardizing the MDT quality has led recently in the development of validated assessment tools [12]. Herein, we presented the results of a prospective pilot evaluation of the quality of the weekly colorectal MDT meetings in a specialized colorectal and peritoneal surface malignancies unit, using as assessment means the cMDT-MODe tool [5]. Our aim was to identify points that could be further improved in our daily practice in order to maximize the benefit for the patients with colorectal cancer treated in our unit.

Our audit results highlight as particularly weak points the lack of in-depth knowledge of the patients' psychosocial status, co-morbidity factors and personal perspectives regarding the various treatment alternatives. However, it must be mentioned that an exhaustive discussion of the management plans is not routinely performed at the outpatients' clinics, in the anticipation of the full radiology and histopathology essays. After the MDT, the patient is informed of all the alternative options and the MDT recommendation and sequentially a more thorough discussion is performed with the treating physician aiming to adjust the recommended plan to the patient's personal circumstances, if possible. Therefore, although the MDT appeared not to be aware in depth of the patients' psychosocial profile and their exact views regarding their treatment options, the latter would not significantly impair the final management. However, it is beyond doubt that knowledge of these details in advance would help the MDT reach more easily a more suitable

recommendation.

To the best of our knowledge, this is the first study to use the cMDT-MODe tool in its colorectal cancer-specific format, apart from its validation study, by Shah et al. Interestingly the authors similarly reported that the MDT scored high in terms of presenting adequately the patient's clinical history (4.57/5). In accordance to our findings, the MDT performance was less satisfactory when referring to the availability of adequate radiological information and histopathology results (scores 4.22/5 and 3.81/5 respectively). Moreover, similarly to our findings, the MDT at the time of decision-making was only fairly aware of the patients' personal views regarding the treatment options (2.14/5). In addition, little was known concerning the patients' accompanying co-morbidity factors and psychosocial circumstances (scores 2.83/5 and 1.81/5 respectively).

Summarizing, the cMDT-MODe tool appeared to be concise in terms of how to score the different parameters, without the presence of "grey zones" that would impair the performance of objective judgment and scoring. Its terminology is clear and it could be used even by assessors with limited relevant experience. Moreover, its frequent use could be a way to compare in a standardized and objective way the function of different MDTs in the framework of relevant national initiatives. We believe that the regular quality assessment of the cancer MDT meetings is of paramount importance for maintaining and further optimizing our standards of care; the use of structured and validated scoring systems, such as the cMDT-MODe tool in colorectal cancer is feasible in the daily clinical practice and could be easily used for performance monitoring and training purposes.

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