

IMPACT OF MULTIDISCIPLINARY CARE IN GYNECOLOGICAL CANCER PATIENTS

Arfa Tabassum, Ghazala Mahmud, Nasira Tasnim, Kausar Tasneem Bangash, Sumera Malik

Pakistan Institute of Medical Sciences Islamabad, Pakistan

ABSTRACT

Objective: To determine the impact of multidisciplinary care in Gynecological cancer patients through multidisciplinary meetings (MDM) at MCH centre, Pakistan Institute of Medical Sciences (PIMS), Islamabad.

Study Design: A pre and post intervention comparative study.

Place and Duration of Study: The study was conducted at MCH centre, PIMS and Nuclear Oncology and Radiotherapy Institute, Islamabad from 1st April 2009 to 31st Mar 2010.

Material and Methods: MDM is a regularly scheduled meeting of core and limited team members for the purpose of prospective treatment and care planning of newly diagnosed cancer patients. It was started in 2009 in order to improve the management of the cancer patients according to the international recommendations. In a total of 1 year study period 24 meetings were held. The major audit tool was the documentation of the meeting and its outcomes, patient communication and record of the Nuclear Oncology and Radiotherapy Institute of Islamabad (NORI). A postgraduate student was deputed for documentation.

Results: The study identified that MDM helped in achieving many of the best practices of international recommendations which include team approach to treatment planning as well as to care provision, throughout the complete patient pathway. The workload almost doubled as regards the surgery and outdoor cancer claims. There was a shorter delay to first seen in the cancer clinic and shorter duration from diagnosis to treatment. Team members were present in 90-100% of the meetings.

Conclusion: MDM has swiftly improved the quality of care and follow up of patients with gynecological cancers and should be conducted at all tertiary care hospitals. Problems of access to high quality and timely care of poor patients in public sector should be addressed as poor patients are not compliant to timely follow-up.

Keywords: Gynecological cancer, Multidisciplinary meeting, Principles of best practices.

This is an Open Access article distributed under the terms of the Creative Commons Attribution License (<http://creativecommons.org/licenses/by/4.0>), which permits unrestricted use, distribution, and reproduction in any medium, provided the original work is properly cited.

INTRODUCTION

Multidisciplinary meeting (MDM) is a regularly scheduled meeting of core and limited team members for the purpose of prospective treatment and care planning of newly diagnosed cancer patients as well as those requiring review of treatment plans or palliative care¹. This promotes the linkage of multidisciplinary teams to other teams and to individual practitioners within and between the integrated cancer services, secondly patient management framework is organized with best practice and evidence based care.

We started MDM in April, 2009 and scheduled them fortnightly. In addition to core

team members, Nuclear Oncology and Radiotherapy Institute, Pathologist, Radiologist and Postgraduate students were also invited.

Previously, cancer patients were entertained by referral letters but later on, as the work load increased it was realized that specific MDM is the need of time to improve management of cancer patients according to international recommendations and identify areas that need strengthening.

MATERIAL AND METHODS

This mixed method sequential study was conducted at MCH centre Pakistan Institute of Medical Sciences (PIMS) and Nuclear Oncology and Radiotherapy Institute (NORI) from 1st April 2009 to 31st Mar 2010. A comparative study on the effect of multidisciplinary meetings was conducted. The major tool was the documentation of the meetings and its outcomes, patient communications and record

Correspondence: Dr Arfa Tabassum, Department of Obstetrics & Gynaecology, Mother & Child Health Centre, Pakistan, Institute of Medical Sciences, Islamabad Pakistan
Email: shozabshafiq@gmail.com

Received: 13 Dec 2013; revised received: 31 Oct 2014; accepted: 24 Dec 2014

of NORI. The meetings were held fortnightly at MCH Centre PIMS and NORI alternately. The intervention (MDMs) took place from April, 2009 to March, 2010 (1 year) in which 24 meetings were held. The results in terms of impact of MDMs on management and surgical procedures were compared with pre intervention period from April 2008 to March 2009 (1 year).

All patients of gynecological cancers were discussed in the meetings. A postgraduate student was deputed to document the

was analyzed in SPSS programme version 11.0. Frequency and percentages were calculated for qualitative data. Chi-square test was used to compare the pre and post intervention periods of MDMs. A significance level of < 0.05 was considered significant.

RESULTS

As regards the attendance of core team there was 100% attendance by the Radiation and Medical Oncologists as well as Gynaecologists but only 50% meetings could be attended by the Histopathologists due to their

Table-1: Attendance of core team of health professionals.

Attendance by MDMs Core Team	
Histopathologist	50%
Radiologist	90%
Gynaecologist	100%
Radiation Oncologist	100%
Medical Oncologists	100%

Table-2: Site of cancer (n=196).

Site	No. of patients	% age
CA Ovary	84	42.8%
CA Cervix	41	20.9%
CA Vulva	22	11.2%
CA Endometrium	27	13.7%
Gestational trophoblastic disease	10	5.1%
CA Breast	6	3.1%
Uterine Sarcoma	2	1%
CA Vagina	2	1%
CA Rectum extending into the vagina	1	0.5%
Mullerian tumors	1	0.5%

observations, advices and further management strategies of each patient. The aim of the comparison between pre and post intervention period was to determine the effect of MDMs on gynecological cancer patients. During the study period 196 cancer patients were observed. Patients were discussed and referred to respective centre for further management. The core team members including Gynecologist, Oncologist, Radiologist, Radiotherapist and Histopathologist were present in the meeting. Postgraduate students were also invited to participate in the meeting. Patients who belong to the far flung areas were called on telephone for further management. Those who were non-affording were supported by Zakat fund. Data

commitment at some other forum (table-1).

The major site of cancer was the ovary 84 (42.8%) followed by cervix 41 (20.9%) and vulva 22 (11.2%) (table-2). Among the total 84 ovarian cancer patients, 47 (56%) had serous cyst adenocarcinoma which was the commonest histopathological type (table-3). Among the CA cervix patients, almost all (85.4%) cases had squamous cell carcinoma (table-3).

Similarly adenocarcinoma of endometrium and squamous cell carcinoma of the vulva were found in 22 and 20 cases respectively (table-3). When compared the pre and post MDM period, it was found that the surgical interventions were almost more than doubled. Similarly

preoperative evaluation and examination was also moderately increased. However, when assessed by chi-square test the difference between pre and post MDM period was not statistically proven (table-3).

The audit identified that MDM helped in achieving many of the principles of best practices of international recommendations. In addition to the workload which was doubled, it was observed that there was shorter delay from referral to first seen in the clinic and shorter delay from diagnosis to treatment because the MDM was scheduled in such a manner that the patient could report to the cancer clinic in

the poor patients funding of surgical items including suture materials and antibiotics were provided through Zakat fund.

DISCUSSION

A regular meeting of all health practitioners involved in the treatment and care of cancer patients is an essential feature of multidisciplinary care². They have a shorter journey from diagnosis to treatment and more likely to have evidence based treatment³⁻⁶.

Multidisciplinary meeting is a key enabler of high quality, consistent & coordinated cancer care. Cancer patients that are managed by

Table-3: Histopathological types of cancers CA ovary (n= 84).

Histological type	No. of patients	%age
Serous cyst adenocarcinoma	47	56%
Mucinous cyst adenocarcinoma	12	14.3%
Poorly differentiated	5	6%
Granulosa cell tumor	4	4.8%
Endometroid CA	7	8.3%
Yolk sac tumor	3	3.6%
Immature malignant teratoma	2	2.4%
Mixed germ cell tumor	2	2.4%
Large cell lymphoma	2	2.4%
CA Cervix (n= 41).		
	No of patients	%age
Squamous cell Carcinoma	35	85.4%
Adenocarcinoma	6	14.6%
CA Endometrium (n=27).		
Histological type	No. of patients	%age
Adenocarcinoma	22	81.5%
Endometroid CA	4	14.8%
Sarcoma	1	3.7%
CA vulva (n= 22).		
	No. of patients	%age
Squamous cell Carcinoma	20	90.9%
Verrucous CA	2	9.1%

outpatient department the same day. This not only improved the turnover of the patients but also helped us to schedule them for EUA and biopsy or surgery on priority basis. In addition MDM helped us to devise a standardized form in order to document the observations of each meeting and patient's detailed history which not only improved the management but also their follow up and communication. As regards

multidisciplinary mode of care are more into clinical trials, have a shorter journey from diagnosis to treatment, more likely to have evidence based treatment and therefore better survival outcome¹⁻⁴.

One of the reasons that MDM continued successfully was the core team members i.e.; Gynecologists, Medical and Radiation Oncologists and Radiologists who were present

in 90-100% of the meetings. One year data showed that the work load was almost doubled not only in the outpatient department but also pre and post chemo radiation surgery. In addition referrals from other areas also increased where surgical expertise were not present and they were in the operable stage.

There was 37% rise in staging laporatomies. The overall management of patients in terms of post chemo and radiation surgeries were significantly increased in the

strengthening^{10,11}. The audit conducted in our centre also helped us to find out gaps and barriers for example poor follow-up of cancer patients especially who belonged to rural areas and delay in diagnosis due to lack of free diagnostic services for non-affording patients. These problems need to be addressed to achieve principles of best practices.

Overall, there has been tremendous improvement in the management of gynaecological cancer patients. This comes from

Table-4: Impact of MDMs on management of patients.

	PRE- MDM (Apr 2008-Mar 2009) (n=10)	POST MDM (Apr 2009-Mar 2010) (n=27)	p-value
Post Chemo Surgeries	3 (30.0%)	5 (18.5%)	0.65
Post radiation Surgeries	1 (10.0%)	4 (14.8%)	1.0
Post chemo radiation surgeries	6 (60.0%)	18 (66.7%)	0.75

Table-5: Surgeries.

	Pre - MDM (Apr 2008-Mar 2009) (n=70)	Post - MDM (Apr 2009- Mar 2010) (n=119)	p-value
EUA + Biopsy	26 (37.1%)	50 (42.0%)	0.50
Cystectomy	3 (4.3%)	6 (5.0%)	1.0
Staging Laparotomy	35 (50.0%)	48 (40.3%)	0.19
Werthim s Hysterectomy	3 (4.3%)	5 (4.2%)	1.0
Modified Radical Vulvectomy	3 (4.3%)	10 (8.4%)	0.37

MDM period. Similarly, the overall surgical procedure increased from 70 in pre MDM period to 119 in the post MDM period. Not only were the hysterectomies doubled but also the modified radical vulvectomies, which increased 6 times in one year. This was mainly due to the referrals from other areas where surgical expertise was not available and in fact they were in the operable stage. Michelle Fleming et al found in their audit of MDM that most of their meetings were achieving many of the principles of best practices set out in the Victorian Department of Health Service (DHS) multidisciplinary meeting tool kit. However, the audit also identified some aspects of The Western and Central Melbourne Integrated Cancer Services (WCMICS) MDM that need

the recognition that multidisciplinary care, including access to opinion from gynecologist, medical and radiation oncologists can improve patients outcomes⁵. In addition to this input it is important to have access to such specialty pathology, diagnostic radiology, oncology nursing and other disciplines as necessary⁶.

For all gynecologic cancers, more attention should be paid to the processes of care and their impact on patients outcomes. An appropriate goal for all health care systems is to ensure all women have access to evidence based care. This is particularly important for high-risk women, older women and minority women who suffer a inappropriate amount of the gynecologic cancer related mortality and often don't receive evidence based care^{7,8}.

Adherence to guidelines can help to reduce variations in care due to socio-demographic factors⁹. Pakistan is a developing country, and a poor nation where patient has limited awareness about health issues. Most of the women come at a very late stage of the disease; have poor access or no access to high quality, timely care. This fundamental problem must be addressed to systematically improve health at population level.

CONCLUSION

There is a swift improvement after intervention of multidisciplinary meetings on the management of gynecological patients. These meetings are essential for optimum care and follow up of patients suffering from malignant diseases and should be conducted in all tertiary care hospitals. Annual audit should be conducted to assess the improvement activities, problems of access to high quality and timely care for poor patients should be addressed.

CONFLICT OF INTEREST

This study has no conflict of interest to declare. Abstract and results of this study were accepted and presented in an oral presentation

at the International Conference on Medical Education, organised by Association for Excellence in Medical Education(AEME) and held on 7th-9th March 2014 at University of Health Sciences (UHS) Lahore, Pakistan. No funding was received from any agency or institution.

REFERENCES

1. National Breast Cancer Center (2005) MDM for Cancer Care: a guide for health service providers. National Breast Cancer Center, Camperdown, NSW.
2. Achieving best practice cancer care. A guide for implementing multidisciplinary care. Health.vic.gov.au.
3. Ruhstaller T, Roe M, Thorlimann B & Nicoli (2006). The multidisciplinary meeting: An Indispensable Aid to Communication Between Different Specialties.
4. Sidhom MA, Poulsen MG,(2006) Multidisciplinary Care in Oncology: Medico Legal Implications of group decision, *Lancet Oncology* 7:951 - 054
5. Update of Gynecologic Oncology. *Obstetrics and Gynaecology clinic of North America*.June 2012. Vol .39.Number 2:123-124.
6. Multidisciplinary Cancer Conference. Available at : <https://www.cancercare.on.ca/cms/one.apex?portalId=1377> & page id 8256.accessed October 26,2011.
7. Cress RD, O'Malley CD, Leiserowitz GS. Patterns of Chemotherapy use for women with ovarian cancer: a population based study. *J Clin Oncol* 2003;21(8):1530-5
8. Morgan MA, Behbakht K, Benjamin I. Racial differences in survival from gynecologic cancer. *Obstet Gynecol* 1996;88(6) : 914-8.
9. Brewster WR. The Complexity of Race in the desperate outcome and treatment of minority patients. *Gynecol Oncol*, 2008;III(2):161-2
10. Michelle Fleming , Jenny Byrne, Prof. Szer, How well are we doing multidisciplinary Care? A n Audit of Multidisciplinary meetings in western and central Melbourne, Victoria. Oct 2007- July 2008.
11. Cancer Coordination Unit (2006) Multidisciplinary meeting Toolkit, Victorian department of Human Services, Melbourne, Victoria.