REVIEW ARTICLE

Multidisciplinary approach in head and neck cancer

José Luis Barrera-Franco^{1,*}, Francisco Gallegos-Hernández², Martín Granados-García³
 and Héctor Gurrola Machuca⁴

¹Directorship, Social Security Institute of the State of Mexico and Municipalities State Oncology Center, Toluca, State of Mexico; ²Department of Head and Neck, Oncology Hospital, National Medical Center S.XXI, Mexican Institute of Social Security; ³Department of Head and Neck, National Institute of Cancerology; ⁴Department of Head and Neck, National Medical Center November 20, Institute of Social Security and Services of State Workers, Mexico City, Mexico

Received for publication: 14 August 2016; accepted for publication: 25 February 2017

Available online: 6 November 2017

KEY WORDS

Multidisciplinary
 management;
 Head and neck
 cancer; Healthcare
 delivery

Abstract This is a review article intended to let the medical community know the procedures regarded as the gold standard in the multidisciplinary approach to patients with head and neck cancer. A review was carried out in PubMed looking for works published between January 2010 and December 2015. The search used the terms “interdisciplinary”, “multidisciplinary”, “management groups”, “clinical rounds”, “tumor boards”, and “head and neck cancer” (n = 57). Subsequently, information related to specific experiences on head and neck was selected and analyzed (n = 29). Relevant information will be presented. In addition, the approach to these neoplasms in Mexico will be described based on the treatment guidelines used by Health Institutions with the largest numbers of patients with this pathology. (creativecommons.org/licenses/by-nc-nd/4.0/).

*E-mail for correspondence: coe2005dir@yahoo.com.mx (J. L. Barrera-Franco)

doi:10.24875/j.gamo.M17000071

1665-9201 / © 2017 Sociedad Mexicana de Oncología. Publicado por Permanyer México. Este es un artículo Open Access bajo la licencia CC BY-NC-ND (<http://creativecommons.org/licenses/by-nc-nd/4.0/>).

INTRODUCTION

The purpose of head and neck cancer treatment, as in other neoplasms, is to obtain locoregional control and thereby improve survival. Owing to the anatomical regions involved in this pathology, its treatment has an important impact on patient quality of life in aspects such as ventilation, swallowing, and phonation and the quality of life is therefore of key importance in the therapeutic algorithm. Therapeutic goals in head and neck cancer are as follows: (a) To prevent lesions resulting from procedures intended to aid the patient, (b) to offer efficacious services based on scientific knowledge and avoid therapeutic options without proven benefit, (c) to offer individualized treatment that respects and answers to the patient's preferences, needs, and values, (d) to offer opportune care, reducing waiting time and harmful delays, (e) to increase services' efficacy by optimizing the teams, supplies, ideas, and energy, and (f) to offer equitable care without personal, gender, ethnicity, geography, or socioeconomic characteristics having any influence¹.

With regard to therapeutics, it is important to specify that, at early clinical stages, single treatment either with surgery or radiotherapy (RT) is the cornerstone, and that in locally advanced disease, multidisciplinary treatment is necessary, and that surgeons, medical oncologists, and radiotherapists are therefore the professionals responsible for tumor control. In patients undergoing surgery, chemotherapy (CT) associated with RT in the adjuvant setting is indicated when there are adverse prognostic factors in the surgical specimen such as resection margins or adjacent involvement, multiple lymph node metastases or when there is lymph node extracapsular dissemination. Concomitant chemoradiotherapy (CTRT), preceded or not by induction CT (ICT), is indicated at locoregionally advanced stages or organ preservation intent, mainly the larynx. In patients with recurrent and/or metastatic carcinoma, CT and best supportive approach are the main options, although local treatments, such as reirradiation and rescue surgery, are also considered depending on the case. The treatment of locally advanced and recurrent and/or metastatic carcinomas has evolved, and important efforts have been made to further improve the outcomes, especially with the addition of new biologics such as those targeting the epidermal growth factor receptor for the management of locally advanced, recurrent, or metastatic disease in concomitance with RT or CT².

The concept of multidisciplinary management (MDM)

MDM is the backbone of high-quality management in the treatment of cancer in general and head and neck cancer in particular. MDM groups are working teams comprised by different health specialists who gather relatively frequently and regularly to prospectively and individually (one by one) analyze together clinical cases to formulate recommendations on the best clinical management. The objective of MDM is to ensure that all patients benefit from a team of specialists able to share their experience, knowledge, and personal insight. Other recently agreed MDM definition is about alliances of medical and health professionals related to a specific tumor disease, whose treatment approach is

guided by the willingness to make clinical decisions based on scientific evidence and to coordinate the delivery of care at all stages of the process, encouraging the patients to assume an active role in their own care³. MDM team's objective is to promote better decision-making ensuring that all diagnostic tests, options, and treatment recommendations are the most adequate for each patient. Secondary functions include continuing education, patient quality of care improvement, development of standard guidelines for patient management, and participation in clinical research. MDM-based health-care final goals are to improve local survival with adequate quality of life. MDM can occur through multidisciplinary clinical sessions or tumor boards. In these meetings, several specialists examine patients in a sequential and ordered manner, coordinately carrying out diagnostic procedures and considering treatment options. There are two versions of joint clinical rounds: One where all cases are briefly presented and analyzed and another where only specific complex cases are analyzed in depth. Positive results depend on the presence of qualified professionals, on the preparation and selection of cases, structure of the meeting, experience, efficient leadership, and interactions between the physicians present. MDM strengths are based on its benefits (Table 1). Limitations in the implementation of this approach are related to the requirements of time, space, and material resources. However, there are opportunities to adopt this approach, since there is a need to optimize human and physical resources to decrease health services' costs. MDM groups are generally composed by a central group, a medical support group, and an administrative support group. In the first case, members include surgical oncologists, medical oncologists, radiation oncologists, pathologists, plastic and reconstructive surgeons, maxillofacial surgeons, palliative care specialists, oncology nurses, and psycho-oncologists. Medical support group members include odontologists, speech therapists, palliative care specialists, nutritionists, social workers, and physiotherapists. The administrative support group includes the MDM team coordinator, a data manager, and ideally, a secretary. Wiederholt et al.⁴ discussed the role of the oncology nursing unit coordinator with the purpose to reduce differences by means of care continuity, promotion of an interdisciplinary approach, and patient-centered quality of life improvement. Similarly, Leib et al.⁵ showed that specialist physicians focus their attention mainly on body structures (88%), their functions (76%), and environmental factors (21%); however, several functioning aspects related to daily life activities and socioemotional aspects are not addressed by medical oncologists and must be opportunely treated by other health professionals, members of the MDM team.

International experiences of MDM in the treatment of head and neck cancer

The influence of MDM teams on decision-making has been poorly studied. In general, there are few high-level trials assessing the beneficial effects of MDM teams on quality of care. Wheles et al.⁶ determined the efficacy of the MDM team on diagnosis, staging, and treatment plan in a group of patients with head and neck cancer. The study consisted in a prospective analysis of 120 consecutive patients. Prior and after the presentation of each patient to the tumor board,

Table 1. Benefits of MDM teams implementation in the treatment of cancer

Patient
<ul style="list-style-type: none">- Better quality of life and higher likelihood of clinical response resulting from better diagnosis, staging, treatment, and rehabilitation- Shorter waiting times between each stage of service- Better care-related experience- Higher probability to receive care according to clinical practice guidelines- Higher satisfaction and psychological wellbeing
Medical team
<ul style="list-style-type: none">- Better communication, coordination, and dynamics between members- Higher probability to apply evidence-based medicine- Clearer working routes- Continuous multidisciplinary learning- Higher access to information and participation in clinical trials- Higher possibility to implement clinical practice guidelines- Higher satisfaction at work and psychological well-being of members
Health institution
<ul style="list-style-type: none">- Human and physical resources optimization owing to improvements in consistency, communication, coordination, and clinical decision-making- Lower number of appointments- Reduction of costs in the department- Rational use of health-care resources
MDM: Multidisciplinary management.

joint discussions were held on diagnosis, clinical stage, and treatment plan. Approximately 27% of patients had changes in diagnosis, stage, or treatment plan. Change of treatment was significantly more common in cases of malignancy (24% vs. 6%; $p = 0.0199$). Treatment changes occurred mainly due to MDM addition ($p = 0.0084$). The study concluded that a multidisciplinary tumor board significantly influences on diagnosis and treatment.

Nguyen et al.⁷ conducted a retrospective analysis of 213 patients with locally advanced tumors in a single institution. All treatments were adjusted to MDM team recommendations; 115 patients underwent CT and RT and 98 received post-operative RT. There were no differences in survival, locoregional recurrence, and metastasis between both groups; survival was comparable with the survival rates reported for randomized trials. The study identified the disease site as a determinant factor for treatment selection. The study demonstrated that the MDM approach generated optimal treatment outcomes, with comparable overall survival rates to those reported in randomized clinical trials.

Stalfors et al.⁸ assessed MDM quality based on two questions: How many times can diagnosis, classification, and treatment plan be successfully established on a patient's first contact with the MDM team? And what are the reasons of failure? The study concludes that the validity of MDM team-adopted decisions is satisfactory and that telemedicine does not affect the quality of decisions.

Kelly et al.⁹ carried out a study intended to determine the impact of MDM care on clinical quality measurable indicators including: Dental and nutritional assessment, access to positron emission tomography (PET) as indicated, CT at III/IV Stages, access to CT in cases of capsular rupture or positive margins, and times between surgery and RT. The study made indicator-adherence comparisons in patients treated prior (pre-MDM) and after MDM (post-MDM). Post-MDM treatment was associated with higher adherence to indicators. Patients with MDM had higher rates of dental assessment

(59% vs. 22%; $p < 0.0001$), nutritional assessment (57% vs. 39%; $p = 0.015$), PET (41% vs. 2%; $p < 0.0001$), CT in locally advanced disease (66% vs. 16%; $p < 0.0001$), and adjuvant CT in high-risk disease (49% vs. 16%; $p < 0.0001$). The interval between surgery and RT was shorter in the post-MDM group ($p = 0.009$), as was hospitalization mean duration ($p = 0.002$). This study underscores MDM teams' measurable advantages.

Another study¹⁰ assessed the effect of MDM by comparing a group of patients that had had access to MDM (395 patients) with a group without MDM (331 patients). In the group with MDM, patients at Stage IV had significantly higher 5-year survival rates with regard to those who had no access to MDM (hazard ratio [HR] = 0.69; $p = 0.004$).

Many patients referred to tertiary care centers often arrive with imaging studies that require reinterpretation. Loevner et al.¹¹ assessed the clinical value of imaging studies reinterpretation in an MDM team. CT scans and MRIs of 136 patients were reinterpreted by a radiologist within the frame of an MDM team. Diagnostic change verification was confirmed by pathology analysis (75%), radiologic findings (18%), or clinical and imaging follow-up (7%). Interpretation changes occurred in 56 patients (41%); in 46 (34%), changes were made in the tumor-node-metastasis classification. Three patients with initial diagnosis of cancer turned out to be misdiagnosed, and six patients were diagnosed with a second primary lesion that was absent in the original diagnosis. Changes in image interpretation modified the treatment in 55 out of 56 patients (98%) and affected the prognosis in 53 (95%; $p < 0.001$). The study concluded that image reinterpretation by the MDM team has a significant effect on classification, management, and prognosis.

Birchall et al.¹², when comparing the standard care process and 2-year survival between two patient cohorts found higher survival rates in patients treated by an MDM team (HR = 0.7; $p = 0.02$). On the other hand, Mullan et al.¹³ explored the relationship between the time required to dis-

cuss each case, the number of specialists and the type of case. A total of 105 cases were discussed in 10 MDM meetings. Each discussion was timed, and the number of specialists, the diagnosis, and characteristics of each patient were recorded. Times had a 2-min mean (1-8 min), and the discussion was directly related to the number of specialists ($p < 0.001$). The longest discussions occurred with patients at advanced T-stage ($p = 0.006$), advanced N-stage ($p = 0.009$), older age ($p = 0.02$), and of the male gender ($p = 0.05$). Histological findings and tumor site were not significant factors in the duration discussions. Most discussions about patients with early clinical stage tumors were short (T1: 58% and <60 years, 90-s mean); these patients required little discussion, and their treatment could be reasonably planned according to protocols, leaving more time for those who required further multidisciplinary debate, which implies that the more advanced the stage, the more complex the case will be, and therefore, it will require longer time of discussion.

To date, quality of life assessment has only been a research tool and has not been incorporated to clinical practice. Oates et al.¹⁴ coordinated a prospective study to assess the quality of life that included 288 patients, out of which 134 completed the EORTC C30 (QLQ-30) quality of life survey QLQ-H&N head and neck module before treatment and 3, 6, and 12 months after therapy conclusion. The study demonstrated the need to assess the quality of life within an MDM team as part of the care of patients with head and neck cancer.

Rehabilitation planning simultaneously with anti-tumor treatment within an MDM team reduces post-treatment morbidity by shortening rehabilitation and recovery time¹⁵. A study assessed the effect of a post-treatment rehabilitation program within the MDM approach ($n = 27$). The program included 8 weeks of nutritional control, 6-min walks, body weight control, anxiety control, and quality of life assessments at the beginning and the end of the program. Patients improved the walking distance (effect size = 0.8), 78% of patients maintained or increased their body weight, had a significant reduction on insomnia seriousness, pain, anorexia, shortness of breath, depression, and distress, and in general, had their quality of life improved (effect size = 0.6-0.9). To sum up, the interdisciplinary rehabilitation program is beneficial for patients with head and neck cancer^{16,17}.

Head and neck cancer treatment can imply partial or total communication impairment, and a multidisciplinary approach with speech and language therapy (SLT) can help the patient to maximize functionality and establishing when additional supportive methods are required when assessing the MDM effect on SLT compliance. Machin and Shaw¹⁸ and Starmer et al.¹⁹ found that patients who were initially assessed by multidisciplinary clinical rounds complied better with SLT than those who were not ($p < 0.0001$).

National experiences on MDM in the treatment of head and neck cancer

Mexico has different health systems, and each system has reference hospitals, such as the CMN SXXI Oncology Hospital of the Mexican Institute of Social Security (Instituto Mexicano del Seguro Social), the 20 de Noviembre National Medical Center of the Institute of Security and Social Ser-

vices of State Workers (Instituto de Seguridad y Servicios Sociales de los Trabajadores del Estado), the State Oncologic Center of the Institute of Social Security of the State of Mexico and Municipalities (Instituto de Seguridad Social del Estado de México y Municipios [ISSEMyM]), and the National Cancer Institute (Instituto Nacional de Cancerología [INCAN]).

Each hospital receives different users; however, medical care provided to cancer patients is in general terms very similar in the different health institutions. Usually, when referred, a patient has to carry out a series of administrative procedures to be admitted into any specialty department to corroborate the diagnosis and start treatment. These procedures include meeting the requirements warranting admission to the institution, suffering from a specific type of tumor pathology and being accepted for admission and treatment, which involves a series of administrative procedures to attend a first-time appointment, undergo a socioeconomic study, have a medical record opened, etc. Some stages of the cancer patient route are as follows: Pre-consultation, performance of studies, results consultation, first-time appointment, socioeconomic study, and medical record number assignment, history taking, the performance of studies, treatment establishment, treatment administration, and follow-up appointments. In the middle of paperwork, the patient can wait from weeks to months to be referred to the specialist of the specific pathology. In addition, the patient will receive treatment according to the experience of the doctor he or she was assigned to leaving out the MDM concept²⁰. Several institutions have made special efforts to foster the practice of MDM and have different MDM approaches in head and neck cancer, which are described in Table 2.

Management of patients with head and neck cancer at ISSEMyM State Oncologic Center

The patient is referred with a diagnosis of malignancy or suspicion thereof from units of the Institution and/or Seguro Popular (people's health insurance). He/she is seen in pre-consultation (resident), and general studies, tissue slides review or pathology study are ordered, and history is taken. In the next appointment, approximately 2 weeks later, the patient is received at the functional unit, the case is discussed, and management is decided based on already established guidelines. Some special cases such as vascular tumors are consulted with the hemodynamics area with the ensuing treatment. For patient care, there is support of the anesthesiology, endocrinology, internal medicine, neurology, endoscopy, plastic surgery, maxillofacial prosthetics, and psychology departments. The assessment is carried out by the departments of head and neck oncologic surgery, medical oncology, RT, pain clinic, and palliative care; for supportive studies, there are the departments of imaging, nuclear medicine, laboratory, and pathology. Management is multimodal, and post-treatment follow-up is the area of head and neck oncology; in case the neoplasm is benign, the patient is counter referred. There is participation in study protocols of the institution itself and the pharmaceutical industry in communication with the otorhinolaryngology departments of the institution and occasionally with other oncologic units of the country.

Table 2. MDM experiences in Mexico

Healthcare Institute	INCAN	CMN SXXI	COE ISSEMyM	CMN 20 November
Users	Cancer patients not affiliated to other health institutions, often out-of-town patients with no fixed income, who directly pay for their care, unless they are covered by the catastrophic expenses fund or enrolled in any sponsored research protocol	Patients affiliated to the IMSS health system	Nonaffiliated cancer patients and affiliated workers who serve the state	Active and/or retired state workers affiliated to the ISSSTE health system at the national level, including their families and beneficiaries
Purpose of the MDM board	To generate and update management protocols according to the needs, including selection criteria and treatment characteristics. To optimize communication, times, and agreements	To propitiate adequate patient diagnosis and ensuing treatment	To establish diagnosis and treatment with participation of oncologic areas and, if appropriate, with support of other specialties	To reach a consensus on treatment, program sequential treatments and hurry up 1 st time appointments and/or treatment initiation. In addition, to generate management guidelines, reduce the number of consultations and waiting times for 1 st time appointment
MDM board primary members	Surgical oncology, medical oncology, and radio-oncology	Surgical oncology, medical oncology, and radio-oncology	Surgical oncology, medical oncology, and radio-oncology	Surgical oncology, medical oncology, and radio-oncology
Additional members according to cases	Anesthesiologist, oncologist, odontologist, speech therapist, neurosurgeon, plastic surgeon, maxillofacial prosthesis specialist, social worker, nutritionist	Neurosurgeons, plastic surgeons and ophthalmologists, nutrition, inhalotherapy, speech therapy	Maxillofacial prosthesis, nutritionist, psychologist, anesthesiologist, urologist. In case of plastic surgery, orthopedic surgery or neurosurgery, support is asked to another institution of the same social security area (ISSEMYM)	Maxillofacial surgery and otorhinolaryngology, pathology, nutrition, radiologist physician, etc.
Patients addressed in the MDM board	Patients with great complexity to make decisions who are beyond the inclusion criteria foreseen by protocols	Patients whose treatment is controversial, or there are multiple alternatives in the diagnostic algorithm or patients with rare conditions where there is no worldwide treatment consensus	First-time patients, patients with therapeutic difficulty.	First-time or subsequent patients with recurrence, or complex cases beyond the inclusion criteria foreseen by protocols
Frequency of MDM board meetings	According to the frequency of cases of great complexity	Monthly	Weekly	Weekly

ISSSTE: Instituto de Seguridad y Servicios Sociales de los Trabajadores del Estado; IMSS: Instituto Mexicano del Seguro Social; ISSEMyM: Instituto de Seguridad Social del Estado de México y Municipios; INCAN: Instituto Nacional de Cancerología; MDM: Multidisciplinary management.

Management of patients with head and neck cancer at INCAN

Initial assessment is made by a physician who is a head and neck tumors specialist. On the same day, history is taken, and

the patient his/her disease and his/her sociofamiliar environment are assessed. On the second appointment, 2-3 weeks later, the diagnosis is corroborated, the extent of disease is evaluated, consultations are reviewed, and treatment is proposed. If the patient is a surgical candidate, programming is

carried out. The patient undergoes surgery, usually 3 weeks later. During this time, nutritional treatment is administered, dental repairs are made, prostheses are prepared, and analgesic treatment is administered. The first post-operative appointment carried out by the treating physician and consulted departments 1 week after hospital discharge. In case multimodal management is required as induction, definitive or post-operative treatment, it is usually started in 2 weeks. According to protocols, if the patient requires post-operative multimodal treatment, the supporting departments normally assess the patient in <2 weeks, which are used for surgical recovery and RT or CTRT planning. Radiotherapists and medical oncologists know treatment and evaluation most appropriate times and observe them. They explain treatment details with regard to times, costs, toxicity, benefits, etc., but the treating physician has already explained the general plan of treatment. During definitive, pre-operative or post-operative RT or CTRT, the patient continues to be monitored by the treating surgeon, but also by the radiotherapist, nutritionist, and medical oncologist, who offer the corresponding support.

Management of patients with head and neck cancer at CMN SXXI

At initial assessment patients are divided into two groups, these whose therapeutic decision does not depend on a consensus and those in whom treatment is controversial. In the first group, treatment decision is made on the second appointment. Most patients belong to the second group, where the decision is by consensus. Guidelines that usually are followed include: In locoregionally advanced oral cavity cancer, concomitant CT and RT or ICT followed by a clinical assessment to decide if surgery enabling downstaging was achieved. In oropharyngeal cancer, CT associated with RT, upfront cervical surgery and adjuvant CTRT, or RT based on stage and HPV status, or concomitant CTCT. In very advanced disease without HPV expression, the possibility of ICT is discussed. Laryngeal cancer: In patients with localized tumors, factors that even at initial stage may imply a poor prognosis such as total cord tumor extension, anterior commissure infiltration and epiglottic localization are assessed by the multidisciplinary board for surgical conservative treatment or nonsurgical, conservative treatment. In patients with locally advanced tumors but with functional organ, the board assesses both conservative treatments, and in patients in whom there is no laryngeal function, total laryngectomy is performed, with the voice being rehabilitated by means of speech therapy or prosthesis; for this purpose, patients are previously evaluated by speech therapy personnel. Patients with tumors at the base of the skull are assessed in a joint and multidisciplinary form. Patients with the persistent or metastatic disease, those who have failed to previous therapies, deserve to be mentioned apart. They are jointly assessed by surgeons, plastic surgeons, radiotherapists, and medical oncologists to decide the best way to offer rescue therapy. Pain and nutritional status assessment are offered.

Management of patients with head and neck cancer at CMN 20 de Noviembre

The patient attends the MDM session with the purpose to be examined and to define the best management option based

on his/her condition and clinical guidelines. A clinical summary of the case is presented along with imaging studies, the clinical consensus is reached, and the patient and family companion are informed on management decision, side effects, and treatment sequence. In some cases, patients are referred to the maxillofacial prosthesis department for devices to be made or for prophylaxis or dental extractions; in others, imaging studies or complementary biopsies have to be obtained and an appointment for a new assessment is set in 2 weeks. Patients who are candidates to surgery are programmed, and if necessary, consultations are requested to move the RT appointments forward and obtain the benefit of adjuvant. Patients that by consensus are to receive ICT are scheduled to attend the RT outpatient clinic on the 2nd cycle to program the simulation and initiation 3 weeks after the 3rd cycle. During CT, the patient attends the office every 3 weeks with laboratory tests to assess for toxicity. The RT department initially assesses the patient to inform him/her and his/her family on the treatment and acute and late side effects. During RT, the patient is weekly assessed for the management of acute toxicity. Patient follow-up is carried out by the department of surgical oncology with imaging studies, which, in case of radical management with CT and/or RT, are requested 12 weeks after treatment conclusion, every 3 months on the first 2 years, and every 6 months thereafter.

Head and neck functional units

The oncology functional units (OFUs) are cross-sectional management and service provision models based on multidisciplinary teams, where experts in a particular neoplastic disease, in this case those originating in the head and neck area, share time and space to design the best diagnostic and therapeutic strategy as well as to facilitate the relationship of the patient with the hospital setting since the first visit. The OFU vision is to continuously improve quality of care by facilitating faster diagnosis with correct staging of the disease, to provide the best oncologic treatment and to reduce concomitant morbidity to the minimum. Among the OFUs benefits, the following deserve to be mentioned: Decrease of the diagnosis - treatment interval, facilitating specialists' interaction, standardization of criteria, simplification of medical and administrative attention, standardization of information to the patient, cost reduction, and improvement of working environment.

In the management of the OFUs organizational model, the participation of all oncology specialists as well as medical supporting specialists, paramedical areas, administrative area, residents on training, nursing personnel and social work is essential. Assessment must be performed in physical space designed for this purpose, with the generation of research protocols being also assessed. In practical terms, having a coordinator, making the diagnostic evaluation, identifying necessities, multidisciplinary work, and finally, the therapeutic decision should be contemplated. The general plan includes making an initial appointment at the pre-consultation area where the patient will be seen by the area's doctor, residents, and nurses, with initial staging being made and related laboratory, imaging, and pathology tests being ordered. Subsequently, an appointment is scheduled at the functional unit, where its team members will

analyze and review the case and provide the diagnosis and treatment proposal as well as the sequence of the patient across the different oncology areas. In case any kind of specialist consultation is required, it will be done through the functional unit itself after clinical summary²⁰. As an example of head and neck tumors functional unit, there is the University Hospital of Girona and the Catalan Institute of Oncology, with the latter having completed its first 2 years functioning with more than 1500 patient consultations, out of which 217 were first-time appointments and the rest control visits.

Recently, the European Partnership for Action Against Cancer published a consensus on MDM policy, which focused on five organizational components: (a) Definition of clear objectives of diagnostic and therapeutic care agreed by the MDM team and the patients; (b) establishment of leadership and operative coordination together with inclusion of points of contact with patients and reservation of health professionals time and resources to participate in MDM meetings; (c) implementation of databases about decisions, results, and MDM performance indicators that facilitate assessment of the process and identification of areas for improvement; (d) patient-centered approach, with available and understandable information on clinical and psychosocial aspects of the process of care, unification of communication channels between the health-care team and the patient and participation promotion; and finally, (e) consolidation of supportive policies by national and regional health authorities, scientific societies and patient associations, with special attention to the inclusion of mechanisms to establish and maintain MDM schools³. Owing to the increase in cervical-facial cancer prevalence, and to the complexity that has developed over the past 10 years for its treatment, clinics or units highly specialized on this neoplasm are with no doubt the best alternative to reduce the number of therapeutic decision mistakes and to increase treatment success, thus improving survival and quality of life.

CONCLUSIONS

The care of patients with head and neck cancer in the different health institutions in Mexico is similar with minimal differences. The trend in our country is to integrate attention boards for initial assessment of these patients. The multidisciplinary team grouped in a functional unit ensures that professional efforts are opportunely and correctly coordinated in an environment of continuous discussion between peers. This approach implies care centralization, which benefits diagnostic-therapeutic outcome for patients, and hence, their quality of life. Based on the complexity the diagnosis and treatment of patients with cancer originating in the head and neck area implies, the gold standard for assessment and therapeutic decision should be based on peer discussion in a joint clinical round or multidisciplinary board. Finally, and in addition, a spirit of communication, cooperation, and mutual respect are the basis to obtain the best possible care to the benefit of patients and members of the health system.

DECLARATION OF INTEREST

The authors declare not having any conflicts of interests.

REFERENCES

1. Weber RS. Improving the quality of head and neck cancer care. *Arch Otolaryngol Head Neck Surg.* 2007;133:1188-92.
2. Perri F, Muto P, Aversa C, et al. Integrated therapeutic approaches in head and neck cancer: The importance of multidisciplinary team management. *Anticancer Agents Med Chem.* 2013;13:834-43.
3. European Partnership Action Against Cancer consensus group, Borrás JM, Albrecht T, et al. Policy statement on multidisciplinary cancer care. *Eur J Cancer.* 2014;50:475-80.
4. Wiederholt PA, Connor NP, Hartig GK, Harari PM. Bridging gaps in multidisciplinary head and neck cancer care: Nursing coordination and case management. *Int J Radiat Oncol Biol Phys.* 2007;69:S88-91.
5. Leib A, Cieza A, Tschiesner U. Perspective of physicians within a multidisciplinary team: Content validation of the comprehensive ICF core set for head and neck cancer. *Head Neck.* 2012;34:956-66.
6. Wheelless SA, McKinney KA, Zanation AM. A prospective study of the clinical impact of a multidisciplinary head and neck tumor board. *Otolaryngol Head Neck Surg.* 2010;143:650-4.
7. Nguyen NP, Vos P, Lee H, et al. Impact of tumor board recommendations on treatment outcome for locally advanced head and neck cancer. *Oncology.* 2008;75:186-91.
8. Stalfors J, Lundberg C, Westin T. Quality assessment of a multidisciplinary tumour meeting for patients with head and neck cancer. *Acta Otolaryngol.* 2007;127:82-7.
9. Kelly SL, Jackson JE, Hickey BE, Szallasi FG, Bond CA. Multidisciplinary clinic care improves adherence to best practice in head and neck cancer. *Am J Otolaryngol.* 2013;34:57-60.
10. Friedland PL, Bozic B, Dewar J, Kuan R, Meyer C, Phillips M. Impact of multidisciplinary team management in head and neck cancer patients. *Br J Cancer.* 2011;104:1246-8.
11. Loevner LA, Sonners AI, Schulman BJ, et al. Reinterpretation of cross-sectional images in patients with head and neck cancer in the setting of a multidisciplinary cancer center. *AJNR Am J Neuroradiol.* 2002;23:1622-6.
12. Birchall M, Bailey D, King P. South west cancer intelligence service head and neck tumour panel. Effect of process standards on survival of patients with head and neck cancer in the south and west of England. *Br J Cancer.* 2004;91:1477-81.
13. Mullan BJ, Brown JS, Lowe D, Rogers SN, Shaw RJ. Analysis of time taken to discuss new patients with head and neck cancer in multidisciplinary team meetings. *Br J Oral Maxillofac Surg.* 2014;52:128-33.
14. Oates J, Clark JR, Read J, Reeves N, Gao K, O'Brien CJ. Integration of prospective quality of life and nutritional assessment as routine components of multidisciplinary care of patients with head and neck cancer. *ANZ J Surg.* 2008;78:34-41.
15. King GE, Lemon JC, Martin JW. Multidisciplinary teamwork in the treatment and rehabilitation of the head and neck cancer patient. *Tex Dent J.* 1992;109:9-12.
16. Eades M, Murphy J, Carney S, et al. Effect of an interdisciplinary rehabilitation program on quality of life in patients with head and neck cancer: Review of clinical experience. *Head Neck.* 2013;35:343-9.
17. Passchier E, Stuiver MM, van der Molen L, et al. Feasibility and impact of a dedicated multidisciplinary rehabilitation program on health-related quality of life in advanced head and neck cancer patients. *Eur Arch Otorhinolaryngol.* 2016;273:1577-87.
18. Machin J, Shaw C. A multidisciplinary approach to head and neck cancer. *Eur J Cancer Care (Engl).* 1998;7:93-6.
19. Starmer H, Sanguineti G, Marur S, Gourin CG. Multidisciplinary head and neck cancer clinic and adherence with speech pathology. *Laryngoscope.* 2011;121:2131-5.
20. García AM. Unidades Funcionales en Oncología. In: García AM, editor. Mexico City: Alfíl, S.A. de C.V.; 2013.