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ORIGINAL RESEARCH

Significance of Multidisciplinary Teams for Patients with Oral and Maxillofacial Surgical Diseases: An Observational Retrospective Study in a General Hospital in China

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Objective: The multidisciplinary team (MDT) approach is increasingly being utilized in the management of complex head and neck diseases. This study analyzed the benefits of MDT for patients with head and neck diseases as primary or secondary conditions and categorized MDT meetings into two types: head and neck surgery initiation (HNI) and head and neck surgery participation (HNP). The study further explored the characteristics of these MDT meetings and the factors influencing patient compliance, aiming to optimize MDT treatment models to maximize patient benefits.

Design: Retrospective analysis.

Methods: MDT meetings from January 2021 to December 2023 were reviewed. The meetings and patients were classified into the HNI group and the HNP group. Various factors, including general patient conditions, disease characteristics et al were analyzed using chi-square tests and point biserial correlation tests. *P*-values < 0.05 were considered statistically significant.

Results: A total of 292 MDT cases were analyzed, comprising 127 cases in the HNI group and 165 cases in the HNP group. In the HNI group, the initial diagnosis was modified in 11 cases (8.7%), with 92 patients (72.4%) receiving major recommendations for their treatment plans. In the HNP group, the initial diagnosis was modified in 28 cases (17.0%). The head and neck surgeons had a major impact on treatment plans in 47 cases (28.5%). Notably, patients with head and neck tumors received more major recommendations ($p<0.05$) in the HIN group, and patients who had tumors ($p<0.05$) and from outpatient departments ($p<0.05$) exhibited poor compliance with recommendations.

Conclusion: The MDT approach in general hospitals has improved the rationality of medical decision-making, especially in rare diseases, tumors, and systematic conditions compared to MDT in a single center, with head and neck surgeons playing vital roles. MDT models can be further explored and established.

Keywords: multidisciplinary team, head and neck surgical diseases, patient compliance

Introduction

Multidisciplinary teams (MDTs) have increasingly been integrated into medical practice worldwide.[1–3] Given the highly personalized and complex nature of specific patient conditions, comprehensive examinations and discussions are essential.[4,5] The involvement of MDT has been advocated to ensure timely and appropriate interventions by a diverse range of professionals with varying expertise.[6] The head and neck region is one of the most anatomically complex areas of the human body.[7] This region can be affected by various diseases, including benign and malignant tumors,[8] trauma,[9] and infections.[10] The application of MDTs in the treatment of head and neck diseases has been introduced over the past several decades to improve treatment outcomes.[11–14] MDTs are believed to enhance the care provided to head and neck cancer (HNC) patients,[15,16] with multimodal treatment selection contributing to improved survival rates in advanced

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cases managed by MDTs.[17] Furthermore, MDT approaches not only play a critical role in the treatment process but also offer advantages in pre-treatment prevention[18,19] and post-treatment rehabilitation.[20,21] Maxillofacial trauma patients may also receive psychological support and treatment from the MDT team.[22] It is recognized that patients undergoing head and neck surgery benefit from MDT meetings in numerous ways.[23]

In addition to their roles in head and neck diseases, head and neck surgeons are also integral to MDTs addressing diseases from other medical specialties. Prior to and following radiotherapy, dentists are essential for oral management to prevent complications.[24–26] Additionally, oral surgeons are encountering an increasing number of patients with medication-related osteonecrosis of the jaw due to bisphosphonates.[27] The widespread infection of adjacent tissues[28] and the presence of multiple fractures and injuries[29,30] also necessitate MDT management led by other departments, involving head and neck surgery. Manifestations of systemic diseases in the oral cavity, such as lymphoma[31] and salivary gland injury due to autoimmune diseases,[32] require oral evaluation and treatment. Research indicates that MDTs involving head and neck departments provide significant value in the management of systemic diseases.

Despite the extensive study and advocacy for MDTs, research in head and neck surgery has predominantly focused on the systemic therapy of malignant tumors. The value of MDTs in the management of maxillofacial trauma, infections, deformities, and patients with systemic diseases[33] remains under-evaluated. Oral health is a crucial component of overall human health,[34,35] yet the role of head and neck surgery in treating related diseases among patients from other departments through MDTs is rarely addressed. This study explored the application of MDTs in head and neck surgery-related diseases within general hospitals, focusing on disease classification, treatment plan formulation and implementation, and the differences in initiating departments. The goal was to analyze the characteristics and value of head and neck-related MDTs and propose improvements to medical methodologies.

Methods

Study Design

This observational retrospective study aimed to evaluate the impact of the MDT approach.

Study Population

Patients who underwent the MDT approach at The First Affiliated Hospital of Zhejiang University School of Medicine from January 2021 to December 2023 were selected for this study.

Setting

The study was conducted in the oral and maxillofacial surgery department, along with other departments involved in the MDT at The First Affiliated Hospital of Zhejiang University School of Medicine.

Study Endpoints

Data on patients' medical histories, characteristics of MDT meetings, recommendations, compliance, and clinical outcomes were collected.

Ethical Committee Approval

All study participants were fully informed and provided signed informed consent. The study received ethical approval from the Medical Ethics Committee of The First Affiliated Hospital of Zhejiang University School of Medicine (Ethics Approval Number: 20240309) and was conducted in accordance with the Helsinki Declaration. Patient information was kept confidential throughout the study.

Inclusion and Exclusion Criteria

The inclusion criteria were:

1. MDT discussions were organized based on the patients' conditions, with complete discussion records and summaries of expert opinions.
2. MDT discussions were initiated by the head and neck surgery department (HNI group).
3. MDT discussions were initiated by other departments with the head and neck surgery department invited to participate (HNP group).
4. Clinical data were complete, and patients were followed up for at least 6 months.

The exclusion criteria were incomplete MDT discussion records or clinical data, and follow-up information that could not be analyzed.

Data Extraction and Analysis

Patients' basic information and personal histories were collected from medical records. In approximately 20% of cases a recommendation was given, to estimate the percentage with a 10% precision (95% CI: 15.5% to 25.4%) would require 250 cases.[16] Key features of MDT meetings, such as the initiating department, invited departments, modifications in diagnosis, and treatment plan recommendations, were emphasized. Recommendations related to the primary disease were categorized as major recommendations, while those pertaining to secondary or accompanying diseases were classified as minor recommendations. The Charlson Comorbidity Index[36] adjusted for age (aCCI) was calculated to assess the impact of comorbidities on patients. The Nutritional Risk Screening 2002 (NRS 2002)[37] assessment scale was employed to evaluate the severity of malnutrition. Additional file 1 showed the detailed scoring rules for aCCI and additional file 2 for NRS 2002. Patients with rare diseases were classified according to the National Rare Diseases Registry System (NRDRS), NRDRS was attached in additional file 3.[38] Follow-up analysis included evaluating whether patients adhered to the expert recommendations summarized after MDT meetings. Additional clinical characteristics post-MDT, including the participation of MDT experts in surgery, postoperative recurrence, and infections, were collected from medical records.

Statistical Analysis

Data analysis was performed using SPSS 27.0 (IBM Corp., Armonk, NY, USA). All data were assessed for normal distribution and homogeneity of variance. One-way ANOVA and grouped *t*-tests were utilized to compare the mean values of data sets. Correlations were analyzed using point-biserial correlation tests. The contingency table chi-square test was applied to analyze categorical variables, with Fisher's exact test used when expected frequencies were less than five. In above tests, the null hypothesis is "there is no correlation between the two", and P-values < 0.05 (denoted with an asterisk) were considered statistically significant.

Results

MDT Meetings Initiated by the Head and Neck Surgery Department

A total of 127 MDT meetings were initiated by the head and neck surgery department. The basic demographic information of the patients is summarized in Table 1. Among the patients, there were 96 males and 31 females, with ages ranging from 8 to 91 years, and a mean age of 57.57 ± 15.48 years. Smoking habits were reported in 66 cases (52.0%), while 45 cases (35.4%) indicated a history of alcohol consumption. Additionally, 77 patients (60.6%) had systemic diseases, primarily hypertension, diabetes, and heart disease. The aCCI scores ranged from 0 to 12, with an average score of 5.87 ± 2.99. Nutritional risk was identified in 23 patients (18.11%), characterized by a Malnutrition Risk Screening score of ≥ 3.

Among the 127 meetings, 94 (74.0%) were initiated by the inpatient department, while 33 (26.0%) originated from the outpatient department. A total of 36 different departments participated in these MDT meetings. Patients with head and neck tumors constituted the majority of cases, with malignant tumors accounting for 77 cases (60.6%), predominantly squamous cell carcinoma. Benign tumors were present in 22 cases (17.3%), mainly schwannomas and

Table 1 Basic Information of MDT Patients

	HNI Group		HNP Group	
Number of patients (total=292)	127		165	
Age (mean±SD)	57.57	15.48	52.17	17.40
Gender	n	%	n	%
Male	96	75.59	104	63.03
Female	31	24.41	61	36.97
Primary disease	n	%	n	%
Malignant tumor	77	60.63	62	37.58
Benign tumor	22	17.32	27	16.36
Infectious disease	16	12.60	16	9.70
Trauma	2	1.57	21	12.73
Malformation	4	3.15	0	0.00
Neurological diseases	0	0.00	11	6.67
Others	6	4.72	28	16.97
Rare disease	n	%	n	%
	3	2.36	8	4.85
Personal history and past illness	n	%	n	%
Smoking	66	51.97	51	30.91
Drinking	45	35.43	27	16.36
Systemic diseases	77	60.63	77	46.67
aCCI (mean±SD)	5.87	2.99	4.14	3.03
NRS	n	%	n	%
0–2	104	81.89	130	78.79
≥3	23	18.11	35	21.21

hemangiomas, while 16 cases (12.6%) were related to infectious diseases, primarily interstitial infections or osteomyelitis. Additionally, three rare diseases were discussed: Behçet's disease, melanoma, and neuroblastoma.

Through the MDT meetings, the initial diagnosis was modified in 11 cases (8.7%). Major treatment recommendations were made for 92 patients (72.4%), with 35 patients receiving minor recommendations. Surgical treatment was advised for 66 patients (52.0%), with surgical plans thoroughly discussed. For cancer patients, recommendations included neoadjuvant chemotherapy (10 cases, 7.9%), radiotherapy combined with chemotherapy (6 cases, 4.7%), and chemotherapy combined with immunotherapy (3 cases, 2.4%). Supportive treatment was suggested for 8 advanced cases (6.3%) and 9 patients with trauma or infection (7.1%). Furthermore, 21 patients were advised to undergo relevant examinations, such as biopsy, angiography, or PET-CT. Compliance with MDT recommendations was high, with 113 cases (89.0%) following the advised treatment steps, while 14 patients (11.0%) did not comply. Seventeen patients (13.4%) had undergone surgery prior to the MDT meeting, with the majority (110 cases, 86.6%) not having had surgery. After the MDT meeting, 69 patients (54.3%) proceeded with surgical interventions. Among these, 4 patients (3.2%) had surgeries both before and after the MDT meeting. The MDT experts directly performed 24 surgeries, head and neck surgeons

participated in the surgery together with surgeons from departments such as vascular surgery or neurosurgery. 12 patients experienced postoperative infections.

MDT Meetings Inviting Participation of the Head and Neck Surgery Department

In total, 165 MDT meetings invited participation from the head and neck surgery department. The basic patient demographics are presented in Table 1. Among these patients, there were 104 males and 61 females, with ages ranging from 12 to 91 years and an average age of 52.17 ± 17.40 years. Smoking habits were reported in 51 cases (30.9%), while 27 cases (16.4%) had a history of alcohol consumption. Systemic diseases were present in 77 patients (46.7%), predominantly hypertension, diabetes, and renal disease. The highest aCCI score recorded was 13, with an average of 4.14 ± 3.03. Nutritional risk was identified in 35 patients (21.21%).

Among the 165 meetings, 104 (63.0%) were initiated by the inpatient department, while 61 (37.0%) were initiated by the outpatient department. Most MDTs were convened by the administrative department (21 cases, 12.7%), followed by the intensive care unit (20 cases, 12.1%). A total of 47 departments participated, with the radiology department contributing to 117 meetings (70.9%), the highest participation rate. Tumor patients comprised the majority of cases, including 62 patients with malignant tumors (37.6%), mainly squamous cell carcinoma and lymphoma, 27 benign tumor patients (16.4%), primarily schwannomas and hemangiomas, and 21 trauma patients (12.7%). Additionally, 8 cases involved rare diseases, including melanoma and IgG4-related diseases. Following the MDT meetings, the initial diagnosis was modified in 28 cases (17.0%).

In the MDT meetings, the diagnosis and treatment recommendations proposed by head and neck surgeons significantly influenced the final diagnosis and treatment plans in 47 cases (28.5%), with a minor impact observed in 78 cases (47.3%), and no impact in 40 cases (24.2%). A total of 154 patients adhered to the treatment plan established by the MDT meetings, resulting in an overall compliance rate of 93.3%.

Surgery was performed on 12 patients (7.3%) prior to the MDT meeting, while 73 patients (44.2%) underwent surgery afterward. Four patients (2.4%) had surgeries both before and after the MDT meeting. Tumor patients constituted the majority of those undergoing surgery (39 cases, 53.4%). Head and neck surgeons participated in 31 surgeries (42.5%), with a total of 9 patients experiencing postoperative infections. Basic information regarding the MDT meetings is provided in Table 2.

Table 2 Basic Information of MDT Meetings

	HNI		**HNP**	
Approach	n	%	n	%
Outpatient	33	25.98	61	36.97
Inpatient	94	74.02	104	63.03
Number of invited departments (mean ± SD)	5.11	1.24	5.11	3.10
Departments invited				
Radiology	102	80.31	117	70.91
Vascular surgery	73	57.48	40	24.24
Radiotherapy	60	47.24	39	23.64
Medical oncology	52	40.94	38	23.03
Neurosurgery	30	23.62	39	23.64
Infectious Diseases	21	16.54	38	23.03
Anesthesiology	20	15.75	18	10.91
Cardiovascular Medicine	18	14.17	4	2.42
General thoracic surgery	32	25.20	11	6.67
Neurology	10	7.87	30	18.18
Others				
Diagnosis modification	11	8.66	28	16.97

(*Continued*)

Table 2 (Continued).

	HNI		HNP	
Treatment plan modification	MDT comments summary		Head and neck surgery's comments	
Major	92	72.44	47	28.48
Minor	35	27.56	78	47.27
No modification	/		40	24.24
Compliance	n	%	n	%
Yes	113	88.98	154	93.33
Poor	14	11.02	11	6.67
Surgeries after MDT	69	/	73	/
MDT experts participate in surgery	24	34.78 (69 in total)	31	42.46 (73 in total)
Complications after surgeries	12	17.39(69 in total)	17	12.33 (73 in total)

Characteristics of MDT Meetings

In the HNI group, the overall compliance rate was 89%. Among the 14 patients exhibiting poor compliance, 13 were malignant tumor patients. Correlation analysis revealed a significant association between malignant tumor type and compliance (Fisher's exact test, $p = 0.009$), with no statistical correlation found for age, education background, or other factors. In the HNP group, the overall compliance rate was 93.33%. Six patients with malignant tumors, four with benign tumors, and one with another condition displayed poor compliance; however, the difference in compliance among tumor types was not statistically significant. The general conditions of patients, including sex, age, and education level, also showed no correlation with compliance.

A notable result is that the compliance rate for MDT meetings initiated by the medical administration department was 76.19%, significantly lower than the 95.83% compliance rate for meetings initiated by clinical departments (Fisher's exact test, $p = 0.006$). When categorized by initiation approach into outpatient and inpatient departments, patients in outpatient-initiated meetings exhibited poorer compliance ($p = 0.002$). The compliance rates for patients are detailed in Table 3.

When dividing cases by disease type into tumor diseases (including benign and malignant tumors) and non-tumor diseases (including infections, trauma, malformations, and others), tumor patients were more likely to have their treatment plans modified compared to non-tumor patients ($p = 0.040$), indicating that tumor patients benefited more from MDT discussions. The chi-square test indicated no significant correlation between treatment recommendations from head and neck surgeons and disease types. The proportions of major recommendations are presented in Table 4.

Table 3 Compliant Rate of MDT Patients

		HNI group		HNP group	
Divided by initiate department	Administrative department			76.19%	***p=0.006****
	Clinical department	89.00%		95.83%	
Divided by initiate wards	Outpatient	90.40%	*p*=0.52	98.08%	***p=0.002****
	Inpatient	84.85%		85.25%	
Divided by diseases	Malignant tumors	83.12%	***p=0.009****	90.32%	*p*=0.33
	Benign tumors	98.00%		95.15%	

Notes: Patients were divided by initiate department, by initiate wards or by diseases; *P-values < 0.05* (denoted with an asterisk "*", bold, italicized text) were considered statistically significant.

Table 4 Proportion of Major Recommendations in Diagnosis and Treatment Plans for Patients in Different Groups

Divided by Diseases	HNI Group		HNP Group	
	Major Recommendation		Major Recommendation	
Tumor	76.77%	***p*=0.004***	33.71%	*p*=0.11
None tumor	34.29%		22.37%	

Notes: Patients were divided by tumor and none tumor; *P*-values < 0.05 (denoted with an asterisk "*", bold, italicized text) were considered statistically significant.

Based on the MDT treatment recommendations, patients in the HNI group were classified into surgery and non-surgery categories. The aCCI score in the surgery group was 5.35 ± 2.85, while in the non-surgery group, it was 6.46 ± 3.04 (see Figure 1 for detailed distribution of aCCI score among patients), with a statistically significant difference (p = 0.037). However, differences in treatment plan recommendations between the surgery and non-surgery groups were not significant (p = 0.94). Both groups had a similar probability of receiving major treatment recommendations. This suggested that the MDT team tends to adopt conservative measures for patients with high aCCI to avoid treatment delays due to systemic conditions. In the HNP group, the aCCI score was 3.53 ± 2.82 in the surgery group and 4.70 ± 3.12 in the non-surgery group, also with a significant difference (p = 0.014).

Regarding treatment recommendations from head and neck surgery (categorized as major, minor, or no recommendation), no significant differences were observed in aCCI scores between the groups. A correlation was found between the treatment recommendations made by head and neck surgeons (major, minor, no) and the MDT summary recommendations (major, minor) (p = 0.002). Both the patient's systemic comorbidities and the head and neck surgeon's recommendations independently influenced the final MDT treatment recommendations.

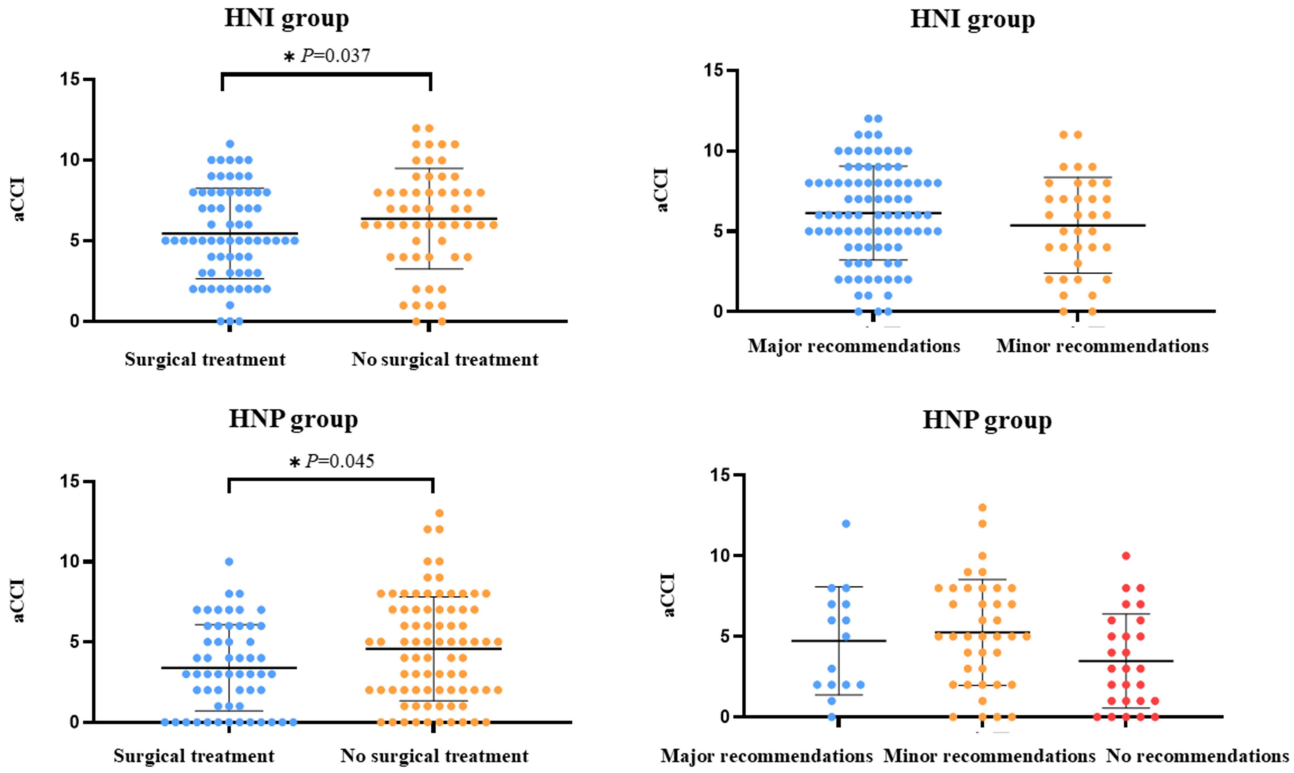

Figure 1 The aCCI for patients in different groups: Each dot represents one patient, the vertical axis represents aCCI score, and the horizontal axis represents patient grouping. *P*-values < 0.05 (denoted with an asterisk "*" and italicized text) were considered statistically significant.

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Discussions

In the HNI group, 8.7% of the patients experienced a revision of their initial diagnosis following the MDT meeting, while 72.4% received major recommendations for their treatment plans. Conversely, the remaining patients received minor recommendations. The overall compliance rate for patients in this group was 89.0%, with 54.3% undergoing surgical intervention. Notably, 25 patients who underwent surgery did so with the direct involvement of the MDT attending surgeons, representing 36.2% of the surgical cohort. In the HNP group, 17.0% of the patients had their initial diagnosis revised. Here, the diagnostic and treatment suggestions made by head and neck surgeons had major impacts in 28.5% of cases and minor impacts in 47.3% of cases. The overall compliance rate was higher at 93.3%, with 44.2% of patients undergoing surgical treatment, and 34 patients (46.6% of the surgical patients) underwent surgery directly facilitated by the head and neck surgeons participating in the MDT discussions.

The data indicated that the MDT initiated or participated by head and neck surgeons plays a pivotal role in the diagnosis, development of treatment plans, and surgical implementation. Previous studies have reported that diagnosis revisions occurred in 4–45% of patients during MDT meetings.[6] For head-neck cancer or trauma, due to its superficial location, the probability of misdiagnosis is relatively low. Moreover, the MDT process has been shown to refine staging or enhance treatment plans for approximately 60% of the patients.[39] Additionally, previous research has suggested that MDT meetings for head and neck diseases modified treatment measures for about 30% of the patients, with 67% of these changes classified as major, and an overall patient compliance rate of 84%.[40] The compliance rates of this study are slightly higher than in previous studies. The potential causes may be that the hospital that carried out the study is the regional medical center, and MDT is known by more and more patients after long-time publicity. It is also a major proof of the good implementation of our MDT. Reports from the Netherlands have highlighted that in a head and neck tumor center, MDT meetings led to modifications in management recommendations for 22% of the patients, including 16% major modifications.[41]

In our study, the rates of postoperative infection were 17.4% in the HNI group and 12.3% in the HNP group. While comparable literature on postoperative infection rates in head and neck surgery is limited, some studies report rates ranging from 6.5% to 18.2%.[42] Other data indicate an overall incidence of local complications following head and neck surgery at approximately 10%, with systemic complication rates around 27%.[43] Life-threatening complications after surgery occur in about 14.5% of the cases, although direct comparisons of postoperative complication rates remain challenging due to the lack of matched patients in the literature.[44] The indicators for MDT conferences in this study aligned closely with previous findings, highlighting the clinical relevance of MDT participation in surgical outcomes, including an analysis of the involvement of MDT physicians in surgical procedures and the management of rare diseases.

Furthermore, our findings highlighted the indispensable role of the MDT in the diagnosis and treatment of head and neck diseases. MDTs in general hospitals offer distinct advantages over single-discipline centers, particularly in multi-disciplinary collaborative surgeries and the management of rare conditions. Patient systemic complications emerged as significant factors influencing surgical decisions; however, treatment for primary diseases was often not compromised despite these complications or nutritional status. Therefore, patients with poor systemic conditions and nutritional status can derive substantial benefits from MDT approaches. Previous studies have also indicated that the MDT treatment model can enhance prognoses for patients with comorbidities, such as heart disease and diabetes,[45,46] further illustrating the advantages of MDT frameworks in general hospital settings.

In addition, our analysis revealed a correlation between patient compliance and the manner in which MDT meetings were organized. Compliance was notably poorer when meetings were conducted by the hospital administrative department or outpatient services and the statistical difference was significant. To enhance clinical application, previous reports have highlighted the establishment of specialized MDT outpatient clinics and the initiation of MDT meetings by administrative departments.[47] Our hospital adopted a similar approach, which led to a continuous increase in the proportion of first-time outpatients attending MDT sessions. Nonetheless, this study advocates for more comprehensive preparation and long-term evaluations to improve outpatient compliance and treatment effectiveness.[48]

Within the two MDT groups, patients with malignant tumors comprised 60.6% and 37.6% respectively, indicating that this category represents a significant proportion of the patient population. The HNI group received more

recommendations for tumor patients, further suggesting that individuals with head and neck tumors benefit considerably from MDT involvement. However, patients with malignant tumors displayed the highest rates of non-compliance, potentially attributable to the complexities associated with cancer treatment[49] and the unique challenges posed by individual circumstances.[50,51] Given these findings, head and neck malignancies warrant focused attention as key research subjects within MDT treatment models.[52]

In the MDT meetings conducted at our center, the participation of pain medicine and mental health specialists was notably low, with pain medicine specialists involved in only 3.15% and 2.42% of cases in the HNI and HNP groups, respectively. Mental health specialists participated in 0.79% and 6.06% of the cases. Diseases affecting the head and neck often lead to various mental health disorders,[53] including post-traumatic stress disorder, depression, existential anxiety, and delirium.[52] Research indicates that 48–80% of patients undergoing head and neck surgery experience varying degrees of pain, with 8–44% of HNC patients also suffering from mental health issues, such as depression.[16,54] Consequently, it is crucial to enhance the involvement of these relevant departments in the MDT process. Surgeons should cultivate a heightened awareness of these issues and proactively facilitate multidisciplinary psychological support and interventions for patients.

Moreover, MDT meetings sometimes fail to yield accurate diagnoses and treatment decisions due to insufficient imaging information, lack of pathological data, incomplete clinical records, and absences of team members.[55] In our study, 14.4% of the cases were advised to undergo additional examinations, including biopsies, cervical angiography, MRI, PET-CT scans, and bacterial cultures. It is essential for MDT members to be trained in general practice and to possess the requisite competencies to actively contribute to the MDT.[56] Additionally, ensuring that patient information is updated and refined prior to meetings not only expedites treatment progress but also helps prevent the misallocation of MDT resources.

For future efforts, there should be a continuous improvement and promotion of the MDT system, with more meticulous and comprehensive follow-ups. More robust controlled studies are needed to convincingly demonstrate the advantages of the MDT approach and to guide the evolution of the medical system. Establishing MDT groups that encompass diverse aspects of patient care, along with organizing regular MDT discussions, will further promote the application of this model and enhance overall efficiency.

Limitations

This study had several limitations. It was retrospective in nature, with MDT implementations occurring only in recent years, leading to insufficient sample size and follow-up duration. Additionally, the study encompassed various conditions in the field of head and neck surgery, including trauma, infection, and malformation, rather than focusing solely on the systematic therapy of cancer. While this comprehensive approach provided valuable insights, it also led to data clustering that complicated analysis. Furthermore, the study lacked a universally applicable indicator to evaluate the efficacy of the MDT.

Conclusions

The findings of this study suggest that the MDT plays a significant role in the diagnosis and treatment of head and neck diseases, particularly those associated with systemic complications. The MDT approach enhances the accuracy of diagnoses and the rationality of medical decision-making. The participation of head and neck surgeons within the MDT is crucial. Patients with head and neck malignant tumors, complex systemic comorbidities, and rare diseases derive the most benefit from this model. To ensure the quality of MDT meetings and improve patient compliance, a more reasonable meeting request mechanism and enhanced pre-meeting preparations should be implemented. Continuous improvement and promotion of the MDT methodology are essential for its sustained success in clinical practice.

Abbreviations

MDT, multidisciplinary team; HNI, head and neck surgery initiation;HNP, head and neck surgery participation; HNC, head and neck cancer; aCCI, The Charlson Comorbidity Index adjusted for age; NRS 2002, The Nutritional Risk Screening 2002 assessment scale; NRDRS, National Rare Diseases Registry System.

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Disclosure

The authors have no conflicts of interest related to this scientific work.

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