

LETTER TO THE EDITOR

Implementing a virtual multidisciplinary clinical case discussion to manage rare and complex head and neck cancers: an expert-defined protocol proposal from the Italian Association of Head and Neck Oncology (AIOCC)

Discussione multidisciplinare virtuale per la gestione di casi clinici rari e complessi dei tumori della testa e collo: una proposta di protocollo da parte degli esperti dell'Associazione Italiana di Oncologia Cervico-Cefalica (AIOCC)

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Dear Editor,

Head and neck cancer (HNC) represents a heterogeneous group of neoplasms. These tumours may differ in location, pathogenesis, behavior, treatment, prognosis, and effect on quality of life ¹. According to the project RARECAREnet ², HNCs include epithelial tumours of the nasal cavity and sinuses, nasopharynx, hypopharynx, larynx, oropharynx, oral cavity, lip, eye and its adnexa, middle ear, major salivary glands and salivary-gland type tumours. Advanced skin cancer of HN area and complex thyroid cancers are also included for anatomical reasons. HNCs are rare since the incidence rate (IR) of each HNC subsite is < 6/100,000, although the IR varies with the highest value for larynx cancer and the lowest for paranasal sinus and salivary gland cancers. Overall, HNC is the sixth most common cancer worldwide with an annual incidence of approximately 850,000 cases and a mortality rate estimated at 450,000 in 2018, accounting for 3% of all cancers ³. It is typically diagnosed in patients over 60 years of age with heavy use of alcohol and tobacco. In addition, cases of Human Papilloma Virus (HPV)-associated oropharyngeal cancer are being increasingly diagnosed worldwide, especially in younger individuals in the US and Europe ¹. HNC is associated with considerable burden and costs due to the complexity of treatments and treatment-related toxicities and, despite the

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latest advances in the management (e.g. transoral surgical approaches, intensity modulated radiation therapy, proton therapy, immune checkpoint inhibitors), survival has not significantly improved. For all these reasons, diagnosis and treatment of HNC must be tailored to the individual patient and disease. A highly specialised multidisciplinary team (MDT) is required in order to assure the best outcome and avoid or adequately treat any side effects through specific coordinated skills and communication across disciplines, considering that treatment differs according to tumour type (e.g. squamous cell carcinoma vs adenocarcinoma), as well as stage of disease (e.g. I-II vs III-IV), anatomical site (e.g. oral cavity vs larynx/hypopharynx), and surgical accessibility (e.g. open approach vs transoral surgery)¹. Indeed, data from the literature reported that a MDT-based approach is advantageous for HNC patients, improving diagnostic and staging accuracy, reducing the interval time between diagnosis and the beginning of therapy and, most importantly, is associated with higher survival rates⁴. In particular, a change in diagnostic and therapeutic approaches in up to 60% of cases has been reported with MDT management, especially for rare tumours such as those affecting paranasal sinuses, nasopharynx and salivary glands⁵. In addition, most HNC patients arrived at the MDT evaluation for a second opinion, once primary treatment has been already delivered⁵. This means that, in case of an incorrect primary approach, the possibility to regain control of the disease and to cure the patient is extremely small. For all these reasons, a multidisciplinary approach according to evidence-based guidelines is considered mandatory to provide the best diagnostic workup and define the optimal individual treatment strategy. Despite the benefits of MDT, it must be noted that this approach requires considerable time, effort and financial resources and is usually more frequent in highly organised and high-volume centers. Literature data on clinical research suggest that patients treated in high-accrual centers report better treatment outcomes compared to patients treated in low-volume centres. It is now well accepted that high-volume facilities should manage patients with HNC, especially in those with the rarest cancers⁶. In considering solutions to overcome barriers to better care of HNC patients and in healthcare access and utilisation, timely access to comprehensive oncology consultation can be improved by applying the principles of telemedicine to create a virtual MDT (vMDT). The utility of telemedicine has also become increasingly apparent during the COVID-19 pandemic, which led to completely new ways of managing patients remotely through vMDTs⁷. Telemedicine can also be used to connect university and community hospitals to accelerate dispersal of information of recent research, and it can also permit smaller centres to share resources with

larger ones, contributing to increase enrolment in clinical trials. In addition, other several advantages can be foreseen, e.g. reduction of the time spent for travelling for the patient but even for the physician; overcoming geographical barriers; creation of clinical networks. The need to establish a vMDT on a national basis to discuss the most complex cases of HNC, including patients with rare tumours (e.g. those involving the salivary glands; nasopharynx; paranasal sinuses or unknown primaries) is stronger than ever. Rare or complex HNCs present numerous challenges in diagnosis and management, which include the scarce confidence in treating especially by community hospitals given the rarity of the disease, complexity of treatment approaches, and high mortality rates. Notwithstanding the potential benefits, some pitfalls of virtual meetings have been pointed out, which include deficits in engagement, teamworking, training in remote settings⁸, delay in receiving supporting information such as imaging and pathology slides and the cost of virtual informatics infrastructure. In addition, where an MDT in presence dispenses opportunities for group education, increases interdisciplinary research collaboration and promotes collective professional fulfillment, we still know little about the impact of a vMDT, especially for HNC. In a recent report, during videoconference (VC) meetings, behaviour tended to become more formal and the different disciplines may merely state their views, which does not help to formulate an optimal treatment plan for the patient. However, if the teams met each other physically at least once a year and received VC training, this consolidated feelings of solidarity and VC communication between the teams improved⁹.

In Italy there is still a lack of structured protocols for vMDT for HNC patients and no such telemedicine infrastructure exists. In order to define a vMDT protocol for patients with HNC, with emphasis on rare and complex cases, a working group of experts from the Italian Association of Head and Neck Oncology (AIOCC) proposed a structured protocol to be implemented on a national level. The primary aim of this project is to investigate the feasibility of multidisciplinary clinical case discussion at the national level. Secondary objectives include the assessment of adherence to MDT recommendations according to AIOCC pathways and AIOM (Italian Association of Medical Oncology) guidelines; percentage of cases managed according to MDT recommendations; time to treatment initiation; patient's satisfaction; physician's satisfaction etc. "Complex" HN cases are defined as all squamous cell cancer (SCC) requiring a multimodality approach, e.g. stage III-IV (all HN subsites) according to AJCC VIII edition; loco-regional relapse after multimodality treatment; oligometastatic cases and all cases that in the opinion of a "local" MDT require additional discussion of

“secondary” level through a telemedicine approach. Stage I and II are considered “complex” in case of high-risk pathological features (i.e. close margins; R1 or R2 surgery; perineural and/or perivascular spread). Nasopharynx, paranasal sinuses, salivary gland cancers and unknown primaries have been included in the “rare” HNC group. Complex skin cancer (advanced SCC and basocellular cancer) of HN area and advanced thyroid carcinomas with aggressive behaviour will also be included in vMDT discussion. For the first aim, the AIOCC board identified, among its members, a group of experts in HNC management in each of the specialties considered to be mandatory for the MDT (e.g. head and neck surgery, radiation oncology, medical oncology, radiology). Criteria used to identify the experts are established by the patient’s pathway guidelines released by AIOCC. To define an expert in HNC management, a physician needs to have specific training at a high-volume site and to manage a minimal number of HNC patients on a yearly basis: more than 30 HNC surgical interventions per year are required to consider an ENT surgeon as “expert”, and more than 20 HNC patients treated per year are necessary for an expert radiation and medical oncologist¹⁰. The group of experts who defined the vMDT has to be composed of 4 core members (head and neck surgeon, radiation oncologist, medical oncologist and radiologist). Additional non-core members can be added on-demand as needed (e.g. pain therapist, endocrinologist, odontologist, pathologist, nuclear medicine physician). Meetings are to be planned on a biweekly basis. The vMDT activity will start on January 2023 and be open to both AIOCC members and non-members.

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Conflict of interest statement

LDL received conference honoraria/advisory board fees from: Lilly, MSD, Eisai, Sunpharma, Roche, Bayer, Merck Serono, Sanofi-Regeneron, Istituto Gentili Srl, New Bridge; PB received conference honoraria/advisory board fees from: Merck, Sanofi-Regeneron, MSD, Sunpharma, Angelini, Bristol-Myers Squibb, GSK, Nestlé. The other authors declare no conflict of interest.

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Author contributions

LDL and EO conceived and designed the study; LDL, IH, PB, EO, MB, AF, RM, GM, PB discussed the contents and commented on the manuscript.

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