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Letter to the Editor

A structured data header for neck dissection documentation: a feasibility proposal for surgical reporting

Sir,

Every neck dissection tells a story. The surgeon's operative note captures that story in prose-which structures were preserved, which were sacrificed, and why. For decades, this narrative tradition has served clinicians well. These operative notes are useful not just for the surgeons or patients but also are used for audit, research, coding and digital analysis.

The American Academy of Otolaryngology-Head and Neck Surgery (AAO-HNS) classification and terminology of the Modified Radical Neck Dissection (MRND) is widely accepted worldwide primarily because it contains all the relevant information which will aid in the communication and rehabilitation of the patient.[1] However, it also has a drawback in which effective communication cannot be achieved without detailed wordings and we also had this practical discussion in the operating theatre while teaching the post graduate residents.

Keeping in mind the above scenario which we encountered and possibly might have been encountered by other surgeons, we wish to propose a "Structured Data Header" that sits on top of the narrative operative notes to pin point the structures sacrificed in one single heading.

The AAO-HNS classification has evolved over the last three decades with the initial proposal dating back to 1991.[1] In one terminology the MRND was classified as Type I, II and III based on the number of structures preserved. It fell short in being non-specific as to which structures are particularly preserved and sacrificed.[2]

To address this particular concern, the practice has changed from the subtypes of MRND Type I-III to specifically mention the non-lymphatic structures which are preserved in parenthesis.[2] This system gives the clinician the information on which structure was preserved to aid in the rehabilitation and follow up. This system also has an inherent limitation to use verbose communication. To overcome this, the proposed "Structured Data Header" will incorporate the MRND followed by the non-lymphatic structures sacrificed mentioned in parenthesis. This proposal is in line with the existing nomenclature for selective neck dissection.

The detailed description of the MRND is required not just for medico-legal purposes but also clinical communication and rehabilitation. Our proposal is simply intended to supplement the verbose writing in the form of a header. If a patient has undergone MRND with removal of spinal accessory nerve (SAN) because of the disease with preservation of sternocleidomastoid and internal jugular vein, it will be written as "MRND with preservation of sternocleidomastoid and internal jugular vein" thereby implicating the sacrifice of the SAN. Our data header will be "MRND (SAN)" similar to the selective neck dissection nomenclature. This structured data header will help us in immediately picking up the fact that the SAN has been sacrificed and thereby guiding for rehabilitation too. This structured data header can have the potential to reduce the documentation burnout among doctors, aid in conducting departmental audits, data coding and retrieval for training artificial intelligence.[3]

This structured data header is not intended to replace the existing gold standard nomenclature. It can act like the International Classification of Diseases (ICD) code and help us retrieve data effectively from the electronic records in addition to the previous potential benefits. By recording only sacrificed non-lymphatic structures in bracketed form, the notation highlights the clinically important variations that affect function and follow-up. This is useful for clinicians, rehabilitators, audit teams, coders and AI systems.[3,4] The use of data headers and their significance have been demonstrated in recent times for data management.[5] Table 1 indicates other similar examples.

Table 1: Proposed Structured Data Header for MRND[a].

Procedure description	Proposed notation	Functional impact signalled
MRND[a], with SAN[b] preserved	MRND[a] (IJV[c], SCM[d])	Internal jugular vein and SCM[d] removed.
MRND[a], with SAN[b] and IJV[c] preserved	MRND[a] (SCM[d])	Only sternocleidomastoid muscle removed
MRND[a], with SAN[b], IJV[c] and SCM[d] preserved	MRND[a]	Only levels I-V are removed with preservation of SAN[b], IJV[c], SCM[d]

*a-Modified radical neck dissection, b-Spinal Accessory Nerve, c-Internal jugular vein, d-Sternocleidomastoid muscle.

Although neck dissection is the immediate example, the same principle may be useful in other head and neck procedures like thyroidectomy, parotidectomy and similar surgeries where the preservation or sacrifice of key structures has functional implications. The next step would be cautious consensus-building by specialty societies rather than immediate widespread adoption.

Keeping in mind the possible reduction in physician documentation burnout, improvement in patient care and data fidelity as the triple benefits in one notation, this is a first and a modest call for iteration by the otolaryngology societies worldwide to consider for gradual adoption.

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