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ORIGINAL RESEARCH ARTICLE

T.A.B.: Proposed new system for graphic standardization (and sharing) of clinical histories of bladder cancer patients

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ABSTRACT

Background and Aim: Doctors usually report patients' histories in three forms: on paper, as electronic files, or as slides. However, because accurate reporting of a long clinical history is difficult, especially in cases of chronic or long-term diseases, mistakes and misunderstandings can and do occur.
We have developed and tested a template-based graphic system named T.A.B. (Talking About Bladder) to standardize the clinical histories of patients with bladder cancer (BC), focusing on non-muscle-invasive diseases.
Methods: By standardizing data inputs into a single template using a few simple symbols, the system can combine and overlap clinical, pathological, and therapeutic information.
Results and Conclusions: Our proposed system for reporting BC history could reduce the risk of missing important clinical information, especially in patients with long-term BC.
This simple, immediate, and standardized system of reporting NMIBC medical history could facilitate both adherence to standards of care and assessment of care when treatment guidelines exist.

Keywords: Bladder cancer, Follow up, Treatment

Introduction

Standardization in reporting medical histories is essential for accurate understanding of disease, efficient sharing, and useful comparisons of medical data (1, 2).

One of the most important elements used to describe neoplastic diseases is represented by tumor staging, which describes the severity of a patient's cancer according to the size and/or extent of the primary tumor, and whether or not the cancer has spread to other parts of the body and, if so, where. Staging is important because it can be used to estimate a patient's prognosis, helping doctors to plan appropriate treatment. In addition, knowing the stage of a tumor is important in aiding healthcare providers and researchers to exchange information about patients, also giving them a common terminology for evaluating the results of clinical trials and comparing data from varying experiences.

Nevertheless, in many cancers characterized by long-term follow-up, the description not only of clinical/pathological initial staging but also of the complete medical course is crucial, together with information on subsequent therapies carried out and relapses of disease. In both daily clinical practice and during specialists' meetings, accurate chronological reporting of medical data among doctors is necessary in order to avoid mistakes: communication errors may easily become a problem in managing patients, sharing information, and communicating experiences (3).

Bladder cancer (BC), especially in non-muscle-invasive forms (NMIBC), is one of these kinds of cancers because of the efficacy of available medical treatments and also its frequent tendency to recur, even over long time intervals.

We have developed a template-based graphical system to standardize the clinical histories of patients with BC, focusing on NMIBC.

Materials and methods

By standardizing data inputs into a single template using a few simple symbols (from a popular font, such as Wingdings), the system T.A.B. (Talking About Bladder) can combine and overlap clinical, pathological, and therapeutic information. The set of 26 symbols that we use is shown in Fig. 1A.

Results

Our proposed graphic system for reporting BC history may reduce the risk of missing important clinical information, especially in patients with long-term NMIBC (see example in Fig. 1B) and can help provide a complete general view of the patient's clinical history together with proper sharing of medical data (as in case reports).

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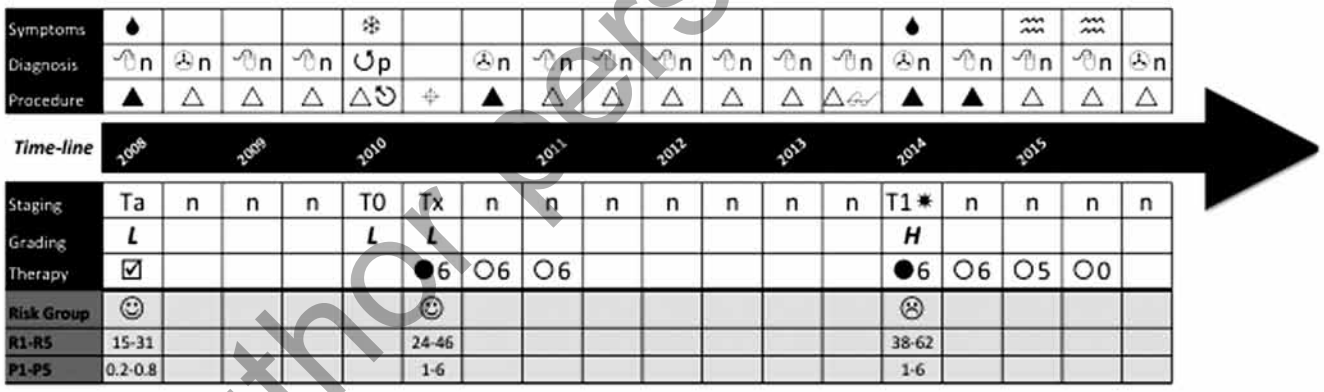
	Symbols		Symbols		Symbols
Symptoms		**Pathology Report**		**Therapy**	
Fever	☼			One Immediate Chem.	☑
Hematuria	♦	*Staging*		BCG induction$_{1\text{-}6}$	●$_{1\text{-}6}$
Pain	≈	Negative	n	BCG maintenance$_{1\text{-}12\text{-}24}$	○$_{1\text{-}12\text{-}24}$
LUTS	❄	T0	T0	MMC induction$_{1\text{-}6\text{-}8}$	■$_{1\text{-}6\text{-}8}$
		Tx	Tx	MMC maintenance$_{1\text{-}12\text{-}24}$	□$_{1\text{-}12\text{-}24}$
Diagnosis		Ta(m)	Ta - Ta$_m$	Other induction$_{1\text{-}6\text{-}8}$	◆$_{1\text{-}6\text{-}8}$
US $_{negative/positive}$	n/p	T1(m)	T1 – T1$_m$	Other maintenance$_{1\text{-}12\text{-}24}$	◇$_{1\text{-}12\text{-}24}$
CT/IVU/MRI $_{neg./pos.}$	n/p	Cis	✷	+EMDA	
Spont. Cytology $_{neg./pos.}$	n/p	≥T2	T2		
Urinary Markers $_{neg./pos.}$	n/p			**Risk Group**	
		Grading		Low	☺
Procedure		Urothelial papilloma	*Up*	Intermediate	😐
Cystoscopy	△	PUNLMP	*P*	High	☹
+PDD/+NBI		Low Grade	*L*	*Not Available data*	?
Random Biopsies		High Grade	*H*		
Fulguration	ϟ			**Bladder Calculator**	
Resection	▲			% Recurrence 1/5 years	R1 – R5
+Cytology				% Progression 1/5 years	P1 – P5

Panel A



Panel B

Fig. 1 - (**A**) List of proposed symbols and their meanings. (**B**) T.A.B.: Example of clinical history of a patient with long-term BC (in this case, a short description of "high-risk patient with non-muscle-invasive chemo/immuno-treated BC" would not be complete or sufficiently informative).

Discussion

Doctors usually report patients' histories in three forms: on paper, as electronic files, or as slides. However, because accurate reporting of long clinical histories is difficult, mistakes and misunderstandings can and do occur (4).

In our clinical practice, communication mistakes may often become apparent, especially if we are describing the long-term history of a patient with NMIBC: the danger is either providing long chronological descriptions of all the endoscopic checks and consequent medical therapies and diagnostic tests, or excessively simplifying the course of cancers, without meticulously describing all the steps involved in medical management.

It is of course arduous to adapt one scheme to all cases because of nonhomogeneity of histories, managements, and therapies. However, according to the EAU Guidelines (5), the entire histories of BC patients must be available, and the best way of doing this is by standardization.

With our proposed template, urologists can easily insert data concerning pathological staging of diseases, urological procedures performed (e.g., cystoscopy, with or without

endoscopic biopsy/resection), relations between therapies prescribed by urologists, and treatments actually followed by patients (e.g., endovesicalimmuno/chemotherapy suspended by the patient himself, because of adverse events), with reporting of the complete medical history in a timeline.

Our system T.A.B. has proved to be simple to understand and easy to use (without a learning curve, due to the legend at the top of the sheet). However, in order to facilitate its compilation, in cooperation with the IT department of our University Hospital, we are developing an application for smartphones/tablets that can automatically fill in the right fields.

The features of our standardized template are as follows:

1. Easy-to-use: this system is quick and easy to use, teach, learn, and understand, and is based on relatively few objective findings.
2. Reproducibility: this is the ultimate goal in reducing communication errors, and consequently mistakes in patients' management.
3. Clinical relevance: our template seems to be helpful in selecting the best scheme of management, tailored to each single patient.

A simple, immediate, and standardized system of reporting NMIBC medical history could facilitate both adherence to standards of care and assessment of care when treatment guidelines exist.

We suggest introducing it progressively during local meetings, first adopting both traditional and T.A.B. methods, and then demonstrating the benefits of using the new standardized system.

Disclosures

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Conflict of interest: The authors have no conflict of interest.

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