

New classification of rating facial nerve dysfunction

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SUMMARY: New classification of rating facial nerve dysfunction.

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In consideration of the complexity of the physiopathology of the facial nerve and to get a standard model of classification of his dysfunction, it appears evident the necessity in the clinical practice to have a rapid, simple and easy system. Grading of facial function is necessary for evaluating and communicating the spontaneous course and the results of medical and surgical treatment. Different grading scales have been proposed but none has been universally accepted; the author revises the principal systems of classification and proposes a new and easy model.

RIASSUNTO: Nuovo sistema classificativo del deficit del nervo facciale

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In considerazione della complessità della fisiopatologia del nervo facciale, appare evidente la necessità di avere un sistema di classificazione rapido, semplice e facilmente utilizzabile nella pratica clinica delle sue alterazioni funzionali. Classificare il grado di disfunzione del nervo è necessario per valutare sia l'entità del danno che i risultati ottenuti con il solo trattamento medico o con la chirurgia. Numerose scale di classificazione sono state proposte ma nessuna è stata accettata universalmente. L'Autore cita tali sistemi e propone un nuovo ed agile modello.

KEY WORDS: Facial nerve - Bell's palsy - Physiology.
Nervo facciale - Paralisi di Bell - Fisiologia.

Introduction

A universally accepted, rapid, accurate clinical assessment of facial nerve function is very important in the management of facial nerve dysfunction. To evaluate the efficacy of various treatment for facial nerve paresis, clinicians need a reliable grading scale to describe and compare abnormalities of function. It should be sufficiently sensitive to measure disability from the onset to the various states of recovery and to detect changes over time or after treatment.

However the measurement of facial nerve function in a consistent manner has proven to be difficult because of the complexity of facial nerve physiology; not only does the nerve control multiple motor region of the face but also it controls special functions such as salivation, lacrimation and taste. Acute peripheral fa-

cial nerve palsy is characterized by a sudden unilateral weakness of facial muscles. Injuries to the facial nerve cause varying degrees of dysfunction to some or all of these functioning units. Herpes zoster, trauma, polyneuritis and *Borrellia*, tumors, diabetes mellitus are known etiologic and/or concomitant factors involved in the disease. In approximately 70%, when the relevant cause of palsy is unidentified, the condition is known as Bell's palsy (1).

The various scales proposed for grading nerve dysfunction differs in their degree of subjectivity: some are highly complex and quantitative, others are based on verbal description and few have been subjected to critical analysis of validity, reliability and sensitivity. These considerations it make necessary an easy and rapid system of classification accessible to all clinicians.

Method

The grade of facial nerve deficit is derived by summing the point assigned for each category: the lowest grade is 0, correspondent to the normal function of the facial nerve, and the highest grade within the scheme is 5 for total paralysis (Tab. 1).

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TABLE 1 - DETERMINATION OF FACIAL NERVE DYSFUNCTION GRADES.

<i>Graded feature</i>	<i>Score</i>
Forehead	
Normal motion	0
None motion	1
Eye	
Complete closure without effort	0
Complete closure with maximum effort	1
Incomplete closure	2
Mouth	
No asymmetry with maximum effort	0
Light asymmetry without effort	1
Complete asymmetry	2

Discussion and conclusion

The House-Brackmann Grading Scale (HBGS), introduced in 1983 (2) and endorsed by the Facial Nerve Disorders Committee of the American Academy of Otolaryngology in 1984, has been successful in proving a standard method for reporting facial ner-

ve function; the major criticism of the HBGS have been its inability to distinguish between finer grades of facial nerve dysfunction, the subjective nature of the scale (resulting in high interobserver variability) and the ambiguity with which it addresses the secondary defects of facial nerve function.

Several new methods have been reported and offer potential improvements compared with currently accepted standard. There are two main types of facial grading system. Gross clinical five-to-six point scales with an overall assessment of facial nerve motor function have been proposed by Peitersen (1). Regional unweighted and weighted system, evaluating different areas of facial function has been devised by Ross et al. (3), Yanagihara (4), and Smith et al. (5). In addition to these main system, there are specific and objectives scales (6) according to Burres and Fisch (7) and Nottingham system (8).

The necessity of an immediate, simple and fast system by which it is possible to recognize the entity of the facial nerve deficits, both to physical experts neurosurgeons and otolaryngologists and also to residents and medicine's students, it is the purpose of this new proposed classification system.

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