Revista Española de
Cirugía Oral y Maxilofacial
www.elsevier.es/recom

Original article

Prognostic classification for malignant tumors of the parotid gland☆

Juan M. Maza-Solano, Serafín Sánchez-Gómez, Tomás Herrero-Salado, Gustavo Benavente-Bermudo, Julio Ventura-Díaz, Emilio J. de Mingo Fernández*

Servicio de Otorrinolaringología, Hospital Universitario Virgen Macarena, Sevilla, Spain

ARTICLE INFO

Article history:
Received 14 October 2014
Accepted 28 January 2015
Available online xxx

Keywords:
Parotid carcinoma
Prognostic factors
Vander Poorten

ABSTRACT

Objective: The histological classification of the World Health Organization (WHO), along with improved imaging studies, provide relevant information for the management of parotid carcinomas. However, the prognosis depends on factors other than histology and tumor extension. This article evaluates the usefulness of a prognostic classification of parotid cancers, including these factors in patients in a hospital area.

Methods: A follow-up was conducted on 19 patients with parotid carcinomas, excluding lymphoid tumors or intra-parotid metastases, between 1998 and 2012. The prognostic index was obtained from the formulas proposed by Vander Poorten, with factors including age, tumor size, lymph node involvement, skin invasion, facial nerve involvement, perineural growth and margins of resection, before surgery (PS1) and after (PS2). Overall survival was related to 5 years for each patient based on their inclusion in any of the 4 risk groups defined.

Results: Risk stratification based on the results Vander Poorten PS2 was distributed into Risk Groups (GR) 1 (3 patients, 15.7%), 2 (5 patients, 26.3%), 3 (1 patient, 5.8%) and 4 (10 patients, 52.2%). The 6 patients who died during follow-up belonged to GR4. Only one of the 4 patients belonging to GR4 has exceeded the 5-year survival up to the current time.

The comparison of the values that relate the pretreatment (PS1) and after treatment (PS2) results showed overall survival in patients with PS1 < 4.5 and PS2 < 4.9, whereas mortality was greater with indices of PS1 > 6.5 and PS2 > 7.7.

Conclusions: Vander Poorten index can be applied in hospital areas with small numbers of parotid carcinomas. It enables a more accurate prognosis for individual patients.

☆ Please cite this article as: Maza-Solano JM, Sánchez-Gómez S, Herrero-Salado T, Benavente-Bermudo G, Ventura-Díaz J, de Mingo Fernández EJ. Clasificación pronóstica de los tumores malignos de glándula parótida. Rev Esp Cir Oral Maxilofac. 2015. http://dx.doi.org/10.1016/j.maxilo.2015.01.007

* *Corresponding author.*
E-mail address: juan.maza.solano@gmail.com (J.M. Maza-Solano).

Clasificación pronóstica de los tumores malignos de glándula parótida

Palabras clave:
Carcinoma parotídeo
Factores pronósticos
Vander Poorten

RESUMEN

Objetivo: La clasificación histológica de la Organización Mundial de la Salud (OMS) junto con mejores estudios de imagen aportan información relevante para el manejo de los cánceres de parótida. Sin embargo, su pronóstico depende de otros factores diferentes de la histología y la extensión tumoral. El presente trabajo valora la utilidad de la clasificación pronóstica de Vander Poorten creada en 1999 de los cánceres parotídeos que incluye todos estos factores en los pacientes de nuestro medio.

Métodos: Seguimiento de 19 pacientes con carcinomas de parótida distintos de tumores linfoideos o metástasis intraparotídeas entre los años 1998 y 2012. Se obtuvo su índice pronóstico a partir de las fórmulas propuestas por Vander Poorten, que incluyen los factores de edad, tamaño tumoral, afectación ganglionar, invasión cutánea, afectación del nervio facial, crecimiento perineural y márgenes de resección, antes de la cirugía (PS1) y después (PS2). Se relacionó la supervivencia global a los 5 años de cada paciente a partir de su inclusión en alguno de los 4 grupos de riesgo definidos.

Resultados: La estratificación de riesgo de Vander Poorten según los *resultados PS2* se distribuyó en grupos de riesgo (GR) 1 (3 pacientes, 15,7%), 2 (5 pacientes, 26,3%), 3 (un paciente, 5,8%) y 4 (10 pacientes, 52,2%). Los 6 pacientes que fallecieron durante el seguimiento pertenecían al GR4. De los 4 supervivientes del GR4 solo uno ha superado el seguimiento de 5 años.

La comparación de las medias que relacionan las variables de resultado pretratamiento (PS1) y postratamiento (PS2) mostró una mejor supervivencia global en los pacientes con valores de PS1 < 4,5 y PS2 < 4,9, mientras que la mortalidad fue mayor a partir de los índices de PS1 > 6,5 y PS2 > 7,7.

Conclusiones: El índice de Vander Poorten es aplicable en áreas hospitalarias con escaso número de carcinomas de parótida. Permite establecer un pronóstico de supervivencia más certero sobre pacientes individuales.

Introduction

Malignant tumors of the parotid gland are characterized by a low incidence (1–3% of all head and neck cancers) and a marked histopathological heterogeneity.[1] Approximately 70% of the malignant tumors of the major salivary glands are located in the parotid glands.[2]

Initially, the diagnosis is clinical, and requires fine-needle aspiration biopsy (FNAB) to determine the nature of the tumor. Computed tomography (CT) and magnetic resonance imaging (MRI) are key elements in the anatomical study, preoperative evaluation and determination of the extension.[3]

The treatment of choice is always parotidectomy, with preservation of the facial nerve whenever possible.[4,5] The need for radiotherapy,[6] chemotherapy or cervical lymph node dissection will depend on the stage, aggressiveness and histological type of the tumor.

At the present time, there is no standardized approach to the management of cancer of the major salivary glands because of the many subtypes, each with a unique molecular background and variable clinical behavior.[7] Even so, locoregional control of the cancer is satisfactory and the most common cause of treatment failure is the development of distant metastasis.[8] Although the control of the disease continues to be variable, it would be possible to predict the prognosis in individual patients using multivariate analysis. The ability to predict the prognosis in these cancers would make it possible to know what course the disease will take.

The risk stratification model proposed by Vander Poorten et al.[9] as a predictive index could prove to be useful, as it interrelates many of the variables that influence prognosis and survival in patients with parotid carcinomas: age at diagnosis, tumor size, lymph node involvement, skin invasion, facial nerve involvement, perineural growth and resection margins. In this approach, all these factors are examined before and after the proposed treatment.

Methods

For this study, we chose to use the prognostic index devised by Vander Poorten et al.,[4,9] which establishes 2 numerical values to estimate the probability of survival according to the results of the formulas, expressed as the prognostic score (PS) before treatment (PS1) and afterwards (PS2).

In this case, we divided the results into 4 groups, going from lower risk to higher based on the posttreatment scoring system described by Vander Poorten et al.[4,9] in their original study: risk group [RG]1: <3.99; RG2: 3.99–4.80; RG3: 4.81–5.67 and RG4: >5.67. In accordance with the data obtained, the numerical result was used to establish the prediction for the population-based overall survival in our regional health area among patients diagnosed from 1998 to 2012 and having