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ORIGINAL ARTICLE

Influence of the location and number of metastases in the survival of metastatic prostatic cancer patients☆

A. Guijarro[a,*], V. Hernández[a], J.M. de la Morena[a], I. Jiménez-Valladolid[a], E. Pérez-Fernández[b], E. de la Peña[a], C. Llorente[a]

[a] *Servicio de Urología, Hospital Universitario Fundación Alcorcón, Alcorcón, Madrid, Spain*
[b] *Unidad de investigación, Hospital Universitario Fundación Alcorcón, Alcorcón, Madrid, Spain*

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KEYWORDS
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Abstract

Introduction: The prognosis of patients diagnosed with metastatic prostate cancer seems to be modulated by factors such as the number and site of metastases. Our objective is to evaluate survival outcomes according to the number and site of metastases in our series of metastatic patients over the last 15 years.

Materials and methods: A retrospective analysis was performed on patients diagnosed between 1998 and 2014. We analyzed overall survival and progression-free survival, depending on the number and location of metastases on patients with newly diagnosed metastatic prostate cancer. Other potential prognostic factors were also evaluated: age, clinical stage, PSA at diagnosis, Gleason, PSA nadir, time till PSA nadir and first-line or second-line treatment after progression.

Results: We analyzed a series of 162 patients. The mean age was 72.7 yr (SD: 8.5). The estimated median overall survival was 3.9 yr (95% CI 2.6–5.2). The overall survival in patients with only lymph node metastases was 7 yr (95% CI 4.1–9.7), 3.9 (95% CI 2.3–5.5) in patients with only bone metastases, 2.5 yr (95% CI 2–2.3) in lymph nodes and bone metastases, and 2.2 yr (95% CI 1.4–3) in patients with visceral metastases ($p < 0.001$).

In multivariate analysis, the location of metastasesis significantly associated with overall survival and progression-free survival. The number of metastases showed no association with survival.

Conclusions: The site of metastases has a clear impact on both overall survival and progression-free survival. Patients with only lymph node involvement had a better prognosis. The number of metastases showed no significant impact on survival in our series.

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* Corresponding author.
E-mail address: ana.guijarroc@gmail.com (A. Guijarro).

PALABRAS CLAVE
Cáncer de próstata;
Metástasis ganglionares;
Metástasis óseas;
Metástasis viscerales

Influencia de la localización y del número de metástasis en la supervivencia de los pacientes con cáncer de próstata metastásico

Resumen

Introducción: En los pacientes con cáncer de próstata metastásico el pronóstico de la enfermedad podría estar modulado por factores como son la localización y el número de metástasis. Nuestro objetivo es evaluar la supervivencia de los pacientes en función de estos factores en nuestra serie en los últimos 15 años.

Material y métodos: Estudio retrospectivo de pacientes diagnosticados entre 1998 y 2014. Calculamos la supervivencia global y la supervivencia libre de progresión, en función del número de metástasis y la localización de las mismas. Analizamos otros posibles factores pronósticos: edad, estadio clínico, PSA, Gleason, PSA nadir, tiempo hasta PSA nadir y tratamientos de primera línea o segunda línea tras la progresión.

Resultados: Evaluamos a 162 pacientes con una edad media de 72,7 años (DE: 8,5). La supervivencia global fue de 3,9 años (IC95%: 2,6-5,2) Según la localización de las metástasis la supervivencia global fue de 7 años (IC95%: 4,1-9,7) para los pacientes con metástasis ganglionares; 3,9 años (IC95%: 2,3-5,5) en caso de metástasis óseas; 2,5 años (IC95%: 2-2,9) para metástasis óseas y ganglionares; y 2,2 años (IC95%: 1,4-3) en pacientes con metástasis viscerales ($p < 0,001$).

En el análisis multivariante, la localización de las metástasis se asoció significativamente con la supervivencia global y libre de progresión. El número de metástasis no presentó impacto en la supervivencia.

Conclusiones: La localización de las metástasis tiene una clara influencia tanto en la supervivencia global como en la supervivencia libre de progresión, siendo los pacientes con afectación exclusivamente ganglionar los que presentan mejor pronóstico. El número de metástasis no tiene un efecto significativo en la supervivencia de nuestra serie.

Introduction

In recent years, there has been an improvement in the survival of patients with metastatic prostate cancer (PC) probably due to better health care and earlier diagnosis.[1,2]

Recent clinical trials have demonstrated the benefit in overall survival (OS), progression-free survival (PFS), and in parameters related to the quality of life of new molecules in the treatment of the disease in this type of patients.[3–5] The inclusion criteria of each of these clinical trials are different, and in all of them there is a great heterogeneity in the survival of these patients, such that about 10% of the cases reach a survival greater than 10 years, whereas in a similar percentage of patients, this figure is reduced to less than one year after the initial diagnosis.[6] In some of these trials, the efficacy of docetaxel is related to the volume of metastatic disease[4] and in others the presence of visceral metastases in its use is excluded.[7] For these reasons, it may be thought that factors dependent on the patient as the number and location of the metastases could have a relevant prognostic role.

On the other hand, there is no consensus on the appropriate sequence of treatments, so the identification of both clinical and molecular risk factors for progression as well as specific cancer death could facilitate the early identification of patients most likely to benefit from the different therapies and from their sequencing.

Many molecular factors are currently being studied[8] that could modulate the most appropriate treatments in each case, since it seems that metastatic PC is heterogeneous at the molecular level. However, in daily clinical practice, molecular characterization is not available, so the identification of clinical factors remains useful and necessary.

Objective

Our main objective is to evaluate the OS the PFS of patients with metastatic PC at diagnosis based on the number and location of metastases in a context of usual clinical practice.

As a secondary objective, we tried to identify other possible prognostic factors and predictors of progression.

Material and methods

Retrospective study of patients diagnosed with metastatic PC from the onset of the disease, collected from the institutional prospective database between 1998 and 2014. For this study, those patients initially treated with curative intent who subsequently progressed and developed metastasis.

For this study, we excluded patients initially treated with curative intent, who subsequently progressed and developed metastases.

All patients had histopathological diagnosis by prostate biopsy of prostate adenocarcinoma. The Gleason score used for this analysis was that of 2005 for all patients.[9] In addition, all of them underwent abdominopelvic computed