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ORIGINAL ARTICLE

Extended pelvic lymphadenectomy in patients with clinically localized prostate cancer: A prospective observational study☆

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KEYWORDS
Prostate cancer;
Radical prostatectomy;
Lymphadenectomy;
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Abstract
Objective: To determine the frequency of lymph node involvement in patients with clinically localized prostate adenocarcinoma who had radical prostatectomy and extended pelvic lymphadenectomy.
Material and methods: A prospective observational study was conducted on 137 patients with clinically localized prostate cancer of low, intermediate or high risk according to the D'Amico classification. All participants underwent radical prostatectomy plus extended pelvic lymphadenectomy in 3 reference centers in Bogota, Colombia, between 2013 and 2014. The following variables were assessed: age, prostate specific antigen levels, Gleason score of the biopsy, probability of lymph node involvement calculated with Partin tables and the histopathology result of the surgical specimen, with the definitive Gleason pattern and the total number of resected and involved lymph nodes per tumor, according to the territory of the dissection.
Results: A total of 2876 lymph nodes were extracted (an average of 20.99 lymph nodes per patient). There was lymph node involvement in 14 (10.22%) patients. The high-risk and intermediate-risk group presented lymph node metastases in 28.57% and 5.25%, respectively. There was no lymph node involvement in the low-risk group. Of the patients at risk of lymph node involvement (≥2% according to the Partin tables), 19.40% had lymph node metastases.

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Conclusion: Lymph node involvement in our population is similar to that reported in the worldwide literature. Extended pelvic lymphadenectomy increased the probability of detecting lymph node metastases in our community.

PALABRAS CLAVE
Cáncer de próstata;
Prostatectomía radical;
Linfadenectomía;
Metástasis linfática

Linfadenectomía pélvica extendida en pacientes con cáncer de próstata clínicamente localizado: estudio observacional prospectivo

Resumen

Objetivo: Determinar la frecuencia de compromiso ganglionar en pacientes con adenocarcinoma de próstata clínicamente localizado llevados a prostatectomía radical y linfadenectomía pélvica extendida.

Material y métodos: Se realizó un estudio observacional prospectivo con 137 pacientes con cáncer de próstata clínicamente localizado, de riesgo bajo, intermedio y alto según la clasificación de D'Amico. Todos los sujetos fueron llevados a prostatectomía radical más linfadenectomía pélvica extendida en 3 centros de referencia en Bogotá, Colombia, entre los años 2013 a 2014. Se evaluaron las siguientes variables: edad, PSA, Gleason de la biopsia, probabilidad de compromiso ganglionar por tablas de Partin, y el resultado histopatológico del espécimen quirúrgico con el patrón de Gleason definitivo y el total de ganglios resecados y comprometidos por el tumor, de acuerdo al territorio de la disección.

Resultados: Se extrajeron un total de 2.876 ganglios, en promedio 20,99 ganglios por paciente. Se encontró compromiso ganglionar en 14 (10,22%) pacientes. El grupo de riesgo alto e intermedio presentaron metástasis ganglionares en el 28,57% y el 5,25% respectivamente. No hubo compromiso ganglionar en el grupo de bajo riesgo. De los pacientes con un riesgo de compromiso ganglionar $\geq$2%, según las tablas de Partin, el 19,40% presentó metástasis ganglionares.

Conclusión: El compromiso ganglionar en nuestra población es similar al reportado en la literatura mundial. La linfadenectomía pélvica extendida aumentó la probabilidad de detección de metástasis ganglionares en nuestro medio.

Introduction

Prostate cancer is the second most common malignancy in males in the United States, and it has a variation dependent of genetic, epidemiological, and dietary factors.[1] In Colombia the behavior is different. Here it is the first cause in incidence and the second leading cause of cancer mortality in the male population, diagnosing between 6500 and 8000 new cases of prostate cancer every year.[2]

The diagnostic tools that we have today make it possible to detect the disease in earlier stages of their natural history, so most patients with prostate cancer are diagnosed in localized clinical stages (i.e. pT1–pT2 N0 M0).[3] Radical prostatectomy is one of the treatments for curative purposes in localized disease,[3] but recently the discussion has focused on the need for pelvic lymphadenectomy. Pelvic lymph node dissection is the gold standard for the diagnosis of lymph node metastases, because imaging methods, such as computed tomography and magnetic resonance imaging, have proved insufficient because of their low sensitivity, which ranges between 17% and 33% according to different studies.[4–7] On the other hand, different methods have been described for performing lymphadenectomy that basically differ due to their extension. The limited technique that covers only the obturator fossa, standard lymphadenectomy including the obturator fossa and external iliac nodes, and extended lymphadenectomy which includes the above plus the nodes of the region of the internal iliac and common iliac up to the uretero-iliac crossing.[7] Some studies finally conclude that a representative nodal sample from extended lymphadenectomy should include at least 20 nodes in the surgical specimen.[7,8] Currently it is considered that the lymphadenectomy should be extended, taking into account the benefits in survival and disease staging of the disease that this technique has proven over the possible complications arising from its implementation.[9,10]

Taking into account that in our country there is an increasing incidence of the disease; studies should be developed to enable a better understanding and greater knowledge about its behavior in our population. This study focuses on determining the frequency of nodal involvement in localized disease due to its importance as a prognostic factor.

Material and methods

Population

After obtaining approval of the institutional ethics committee, we proceeded to include during the years 2013 and