Management of primary carcinoma of the seminal vesicle

Tratamiento del carcinoma primario de la vesícula seminal

Mr. Director

Adenocarcinoma, the most common histology found in primary malignant tumors of the seminal vesicle (SV), usually presents as a locally advanced disease due to a paucity of symptoms and signs at earlier stages. We recently treated a 62-year-old man with a three-month-history of hematospermia and a PSA of 1.92 ng/ml. On digital rectal examination, an abnormality was noted, and an enlarged right SV was confirmed by ultrasound. MRI demonstrated a 10-cm right SV with a hemorrhagic component that compressed the prostate and bladder. No lymph node enlargement was noted. Transrectal ultrasound-guided biopsy of the SV was histopathologically compatible with a mucinous adenocarcinoma. Prostate biopsy showed the same pathologic characteristics, suggesting secondary invasion. Robotic prostatovesiculectomy with bilateral pelvic lymphadenectomy was intended. Due to tumor size and procedure difficulty, the operation was converted to an open approach and completed successfully. There were no perioperative complications. Final pathology confirmed a 7-cm primary tumor (172 g) of the SV with a histological diagnosis of mucinous adenocarcinoma with papillary architecture (Figs. 1 and 2). Immunohistochemically, the tumor was positive for CA 125 and CK 7, and negative for PSA and PAP. The tumor was invading right and left prostatic lobes, and positive surgical margins were identified. A total of 23 pelvic lymph nodes resected were negative for metastasis. At the last follow-up visit, the patient was doing well with a PSA of 0.01 ng/ml and no signs of disease progression. Adjuvant treatment (hormone therapy and radiotherapy) was proposed.

Primary carcinoma of the SV is difficult to diagnose and differentiate from tumors of the prostate, bladder and rectum invading the SV. Even with advances in imaging allowing increased sensitivity for detection of SV abnormalities and the use of immunohistochemical studies, patients with SV involvement are often diagnosed in late stage and survival outcomes are poor. As the tumor has no pathognomonic features, diagnosis is accomplished through a combination of gross specimen analysis, pre-operative imaging evaluation (no bladder, colon, prostate, or rectal abnormalities on CT or MRI), and immunohistochemical assays. Early diagnosis and aggressive surgical treatment seem to be the only way to improve survival. However, because of the rarity of the disease, guidelines are not available for how to best manage this clinically aggressive entity. Treatment strategies have focused on surgical excision of the tumor. Extensive pelvic lymph node dissection is also recommended. Only tumors without prostatic involvement might be treated with local excision or vesiculectomy alone, a clinical scenario that rarely occurs.

Table 1 shows the cases reported in the last 10 years with emphasis on treatment used. In patients with positive surgical margins, adjuvant radiotherapy might have a role in controlling the disease locally. Chemotherapy has been utilized, but results have been disappointing. Considering surveillance after treatment of the primary disease, CA-125 seems to play an important role in the diagnosis and can be used as a serological marker to monitor treatment response.

We confirm that primary carcinoma of the SV is a rare disease with typically late diagnosis. Biomarkers and clinical vigilance are needed to change the historically poor prognosis of this malignancy. Guidelines for management are still not available, but based on the limited published data, we strongly believe that aggressive surgical treatment with

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**Table 1**

<table>
<thead>
<tr>
<th>Year</th>
<th>Patient Data</th>
<th>Treatment</th>
<th>Outcome</th>
</tr>
</thead>
<tbody>
<tr>
<td>2012</td>
<td>62-year-old man</td>
<td>Local excision</td>
<td>Prostate recurrence</td>
</tr>
<tr>
<td>2013</td>
<td>58-year-old man</td>
<td>Vesiculectomy</td>
<td>Local control</td>
</tr>
<tr>
<td>2014</td>
<td>70-year-old man</td>
<td>Radiotherapy</td>
<td>Prostate control</td>
</tr>
</tbody>
</table>

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**Figure 1** Operative specimen of a small prostate (P) and a very large abnormally appearing right seminal vesicle (S).

**Figure 2** Hematoxylin and eosin stain at 20X magnification. Mucinous adenocarcinoma defined by the presence of large deposits of mucinous material (arrows).

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wide extirpation of the tumor seems to provide the best survival benefit.

References


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doi:10.1016/j.acuroe.2011.06.010