also analyzed in both groups of patients, the sample size was not planned to be powered to detect statistical differences in this variable, as it was already in the editorial of the same issue “New Eng”.

We studied low-risk candidates for active surveillance based on PRIAS/START criteria. Over 40% had unfavorable pathological findings. More than 18% had biochemical progression (Table 1). Albertsen’s study showed a mortality rate from prostate cancer of over 20% in patients with Gleason, aged between 55 and 69 with more than 15 years follow-up.

Low-risk patients are a heterogeneous group. In the absence of validated tumor markers for aggressiveness 7, Wilt’s conclusions are difficult to generalize, particularly in men with a long life expectancy.

References


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Radiological risk and radiation of the percutaneous nephrolithotomy patient

Riesgo radiológico y radiación del paciente en la nefrolitotomía percutánea

To the Editor:

Renal lithiasis in Spain has 0.73% incidence and 5.06% prevalence, with a recurrence rate of 13% during the first year, 35% at 5 years, and 50% at 10 years.¹

Table 1 Study variables: fluoroscopy time, calculated DAP, DAP of the team, and maximum ESD.

<table>
<thead>
<tr>
<th>Patient</th>
<th>Fluoroscopy time (s)</th>
<th>Calculated DAP (cGy × cm²)</th>
<th>PDA of the team (cGy × cm²)</th>
<th>Maximum ESD (mSv)</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>576</td>
<td>18.52</td>
<td>18.83</td>
<td>70.28</td>
</tr>
<tr>
<td>2</td>
<td>922</td>
<td>32.86</td>
<td>35.65</td>
<td>7.11</td>
</tr>
<tr>
<td>3</td>
<td>504</td>
<td>27.10</td>
<td>12.17</td>
<td></td>
</tr>
<tr>
<td>4</td>
<td>595</td>
<td>15.93</td>
<td>25.76</td>
<td>234.1</td>
</tr>
<tr>
<td>5</td>
<td>520</td>
<td>25.19</td>
<td>25.76</td>
<td>171.3</td>
</tr>
<tr>
<td>6</td>
<td>504</td>
<td>25.31</td>
<td>171.3</td>
<td></td>
</tr>
<tr>
<td>7</td>
<td>580</td>
<td>37.37</td>
<td>97.97</td>
<td></td>
</tr>
<tr>
<td>Average</td>
<td>600.1</td>
<td>26.04</td>
<td>23.10</td>
<td>116.2</td>
</tr>
<tr>
<td>Standard Deviation</td>
<td>146.9</td>
<td>7.5</td>
<td>10.0</td>
<td>88.4</td>
</tr>
<tr>
<td>Cv</td>
<td>24.5%</td>
<td>28.7%</td>
<td>43.4%</td>
<td>76.1%</td>
</tr>
</tbody>
</table>

The use of fluoroscopy during percutaneous nephrolithotomy (PNL) exposes the patient and medical personnel to ionizing radiation and its risks. This forces us to reduce it to a minimum.

We recommend following the criterion as low as reasonably achievable (ALARA) in the application of ionizing radiation in medical practice.²

The International Commission for Radiological Protection (ICRP) recommends a maximum effective dose of 20 mSv per year on average over a period of 5 years as the limit in occupational radiation exposure, being generally proportional to the radiation received by the patient,³ not making any specific recommendations for patient dose. The Health and Safety Committee of the Society of Interventional Radiology

offers in their clinical guidelines, in the section of deter-
mministic effect control, which below an estimated dose in
the skin of 2–5 Gy, permanent deterministic effects would
be reasonably rare.4

In order to characterize the dose received by the patient,
the following variables are used: effective dose (mainly
related to the probability of stochastic effects and measured
in Sieverts); the equivalent dose in a specific organ (related
to deterministic effects in that organ, also measured in Sie-
vorts); and the dose-area product, which is an alternative and
less precise estimate of the radiation received by the patient
and the risk involved in it.

One way of measuring the equivalent dose in the skin
(which in the case of the PNL is the most radiosensitive
organ) is using thermoluminescent dosimeters (TLDs) placed
on the skin during the intervention. The use of radiometers
is considered less reliable than the TLDs and the dose-area
product. The use of radiographic or radiochromic plates
provides a graphical approach of the exposed anatomical
regions and the magnitude of such exposure.

Previously, some authors have conducted dosimetry stud-
ies during the NPL, although none of them in our country.
In 10 studies, they use TLD dosimeters for measuring, 2 use
the dose-area product, and one uses radiometers. Of these
studies, only 7 measure the dose received by the patient,
ranging from 0.59 mSv to 250 mSv.5–8

The aim of this study is to characterize the radiation
doses received by the patient during the NPL in our center.

We conducted a prospective, non-randomized, descrip-
tive study of 7 consecutive patients undergoing PNL at our
institution during 2011.

In these patients we measured: the maximum skin dose
in the most irradiated area with TLD, the irradiated area by
radiographic plates, the total fluoroscopy time, the dose-
area product indicated by the team, and the technical data
of the procedure.

The parameters obtained are summarized in Table 1 The
average maximum skin dose, for 5 patients, is 116.2 mSv
(±88.4), showing a larger dispersion (coefficient of vari-
ation: 76.1%) than the fluoroscopy time (24.5%) and the
dose-area product (28.7%). This means that the parameter
generally accessible to the urologist (dose-area product of
the team) does not always behave as a good predictor of
the maximum dose in the skin, which is the one indicating
the risk of deterministic effects that we intend to evaluate.

In our case, the fluoroscopy time, the dose-area product,
and the maximum dose in the skin obtained are comparable
to those published in the literature.

In our study, the maximum dose in the skin received by
the patient is within the range of reasonable safety, so the
PNL seems a safe procedure from the point of view of the
radiation received by the patient.

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20 November 2012 31 January 2013

Retroperitoneal laparoscopic cryotherapy
in bilateral, synchronous kidney tumor

Crioterapia laparoscópica retroperitoneal in
tumor renal sincrónico bilateral

Dear Editor:

Synchronous bilateral renal tumors that are not hereditary
represent less than 4% of all renal tumors1 and their treat-

ment represents a challenge for the urologist. So much so
that there are few publications in this regard on the treat-
ment of these tumors and their oncological outcomes.

We report the case of a 58-year-old male with Marfan syn-
drome, aortic valve prosthesis carrier, and ascending aorta
graft since 1994, on anticoagulant therapy since then. He
presented to us with hematuria. After objectifying by means
of cystoscopy the presence of blood ejaculate through the
left meatus and ruling out bladder tumor disease, an abdom-
inal CT scan was performed which showed 2 peripheral renal
tumors, measuring less than 3 cm, in the posterior convex-
ity of both upper poles (Fig. 1A and B) and a left renal
lithiasis.

Because of the patient comorbidity and bilaterality of the
lesions, we decided to perform a minimally invasive treat-
ment, in order to preserve the renal function and reduce

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