Treatment of anal intraepithelial neoplasia and prevention of anal carcinoma

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2. Health Protection Agency
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Demographics

<table>
<thead>
<tr>
<th>Cohort characteristics</th>
<th>No of Patients (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>AIN 2</td>
<td>56 (61.5%)</td>
</tr>
<tr>
<td>AIN 3</td>
<td>35 (38.5%)</td>
</tr>
<tr>
<td>HIV +</td>
<td>56 (61.5%)</td>
</tr>
<tr>
<td>HIV -</td>
<td>33 (36.2%)</td>
</tr>
<tr>
<td>Male</td>
<td></td>
</tr>
<tr>
<td></td>
<td>82 (90.1%)</td>
</tr>
<tr>
<td>MSM</td>
<td>80 (87.9%)</td>
</tr>
<tr>
<td>Nadir CD4 &lt; 200</td>
<td>37 (46%)</td>
</tr>
<tr>
<td>Mean age</td>
<td>36.6</td>
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</tbody>
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Background:
The rates of anal carcinoma (cancer) have increased over recent decades in Europe and the US.1-3. The anal cancer rates are much higher in HIV positive men and have increased over time4. Moreover, compared to HIV negative people, local clearance rate of anal cancer is much reduced in HIV positive people (87% v 38% at 5 years), after chemoradiotherapy5. Progression to anal cancer from high-grade anal intraepithelial neoplasia (AIN 2/3) has been noted in a number of small observational studies at a rate of 8.6% to 14.3% over 5 years6-8. An opportunity may exist to prevent anal cancer through treatment of AIN 2/3. We present retrospective data on AIN 2/3 cases that underwent laser ablative treatment.

Methods:
Data on patients who had a minimum of 3 year follow-up after AIN 2/3 diagnosis and who underwent ablative treatment for AIN 2/3 was reviewed.

Results:
A total of 91 patients (35 AIN 3; 56 AIN 2) were identified. Fifty six (61.5%) were HIV positive.

Median follow-up for the cohort was 69 months (mean 69.9; range 36 – 180 months).

None of the patients in this cohort developed anal cancer. Twenty five cases (45%) had been HIV + for 15 years or more.

Markov model-based analyses suggest that treatment may have prevented lesion progression in a proportion of patients.

One patient who did not meet the criteria of 3 years of follow-up and was thus excluded from the analysis went on to develop anal cancer. This 49 year old man was HIV + for 21 years with a CD4 nadir of 8. He had 3 quadrant AIN 3 disease.

Interpretation:

• In our cohort of 91 patients with high grade AIN disease, no one developed anal cancer after a median of 69 months of follow up (minimum 3 years).All patients received laser ablative treatment for AIN 2/3.

• Although no large natural history studies exist, available data suggests that AIN 2/3 in some instances can progress to anal cancer. Previously we established 36 months as an adequate period to assess outcome of treatment9,10.

• Though no one in this cohort developed cancer, there was a case of cancer in a treated patient (follow up < 3 years). It is likely this represents a late presentation, where treatment had no impact in reversing the process of malignancy.

• We now need prospective data on treatments employed to prevent anal cancer.

References