SEN TinEL NODES FOR 
EArLY VULVAL CANCER:
FEASIBILITY AND SAFETY IN A LOW RESOURCE 
SETTING

LINDA ROGERS 
RCOG Congress 2017
Declaration of Interests

• None
Vulval Cancer

- Rare
- 4% of all gynaecological malignancies
- 80 - 90% are Squamous Carcinomas
- Incidence has risen in past decades
- Median age at onset has decreased
Vulval Squamous Carcinoma

1) Warty/basaloid type:
   - younger women
   - associated with HPV infection and Vulval HSIL
   - immunosuppression/HIV

2) Keratinising type:
   - elderly women
   - associated with Lichen Sclerosus (LS) and/or Differentiated VIN
Australia study³


- 84% increase in incidence of vulval cancer in women younger than 60 years in the past 30 years
- No change in incidence rates in older women
- Mortality rates stable in younger women
- Mortality decreased by 24% in older women
- Similar findings in Denmark⁴, Holland⁵, England⁶, USA⁷, Canada⁷
At GSH

- +/- 20 new patients with vulval ca every year
- 50% are HIV+
- “Geographic differences in the HPV-attributable fraction of vulval cancers”³

<table>
<thead>
<tr>
<th>YEAR</th>
<th>NUMBER OF PATIENTS</th>
<th>MEAN AGE</th>
<th>MEDIAN AGE</th>
</tr>
</thead>
<tbody>
<tr>
<td>1984-1994</td>
<td>98</td>
<td>55.2 (29-88)</td>
<td>54.8</td>
</tr>
<tr>
<td>2004-2014</td>
<td>152</td>
<td>53.3 (22-92)</td>
<td>52.1</td>
</tr>
<tr>
<td>2010-2014</td>
<td>82</td>
<td>51.2 (22-92)</td>
<td>51.2</td>
</tr>
</tbody>
</table>
Changing Trends in Management

- Over the past 30 years, surgery for vulval cancer has become less radical:
  - More emphasis on vulval conservation for the primary lesion
  - Sentinel Lymph Node (SLN) Procedure to assess the groins

- Survival in lower risk groups preserved

- 5-year survival rates for patients with advanced disease improved:
  - Younger women presenting with less advanced disease
  - Widespread introduction of adjuvant chemoradiation
GROINSS-V

- The Groningen International Study on Sentinel nodes in Vulvar cancer (GROINSS-V) showed that a negative sentinel lymph node (SLN) lowers the risk of groin relapse due to a false-negative finding to less than 3%.¹

- SLN biopsy is now standard of care in treatment of early vulval cancer.
AIMS

- To evaluate feasibility and safety of SLN biopsy in a low resource, high HIV prevalence setting
METHODS

• From 2012 to 2016, all women managed at GSH for early vulval carcinomas, who had indications for SLN biopsy as per GROINSS-V, were offered it as part of their treatment.

• Eligibility Criteria:
  1) Unifocal T1 or T2 tumour < 4cm, not encroaching on urethra, vagina or anus, with clinically negative inguino-femoral lymph nodes;
  2) Perilesional injection of tracers at 3 or 4 sites is possible;
  3) Pre-operative imaging does not show enlarged (> 1.5cm) / suspicious nodes;
  4) Able to give informed consent
Protocol

- Radical excision of vulval tumour with sentinel node procedure
- Radioactive tracer and blue dye
- **Negative SLN:** no further treatment
- **Positive SLN:** full GND & post-op RT
- Morbidity data collection
- Follow-up

Quality control

- Pre-operative imaging (CT / MRI)
- Surgeon: 10 SLNB + GND
- Interpretation of lymphoscintigram
- Pathology: ultra-staging
Lymphoscintigraphy
Sentinel Lymph Node Procedure
Sentinel Lymph Node Procedure
# RESULTS

<table>
<thead>
<tr>
<th>Patient</th>
<th>Age in Years</th>
<th>Background Lesion</th>
<th>HIV Status</th>
<th>Number of Positive SLN</th>
<th>No. Positive Non-Sentinel LN</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>66</td>
<td>Lichen Sclerosus (LS)</td>
<td>Negative</td>
<td>5/7</td>
<td>0/20</td>
</tr>
<tr>
<td>2</td>
<td>76</td>
<td>Vulval HSIL</td>
<td>Negative</td>
<td>0/6</td>
<td>0/13</td>
</tr>
<tr>
<td>3</td>
<td>66</td>
<td>LS</td>
<td>Negative</td>
<td>0/3</td>
<td>0/8</td>
</tr>
<tr>
<td>4</td>
<td>37</td>
<td>Vulval HSIL</td>
<td>Positive</td>
<td>0/6</td>
<td>0/6</td>
</tr>
<tr>
<td>5</td>
<td>60</td>
<td>Differentiated VIN</td>
<td>Negative</td>
<td>0/3</td>
<td>0/8</td>
</tr>
<tr>
<td>6</td>
<td>38</td>
<td>HPV</td>
<td>Positive</td>
<td>1/7</td>
<td>0/5</td>
</tr>
<tr>
<td>7</td>
<td>63</td>
<td>Vulval HSIL</td>
<td>Negative</td>
<td>0/2</td>
<td>0/10</td>
</tr>
<tr>
<td>8</td>
<td>42</td>
<td>Vulval HSIL</td>
<td>Positive</td>
<td>0/9</td>
<td>0/5</td>
</tr>
<tr>
<td>9</td>
<td>53</td>
<td>Vulval HSIL and LS</td>
<td>Negative</td>
<td>0/2</td>
<td>0/15</td>
</tr>
<tr>
<td>10</td>
<td>47</td>
<td>LS</td>
<td>Negative</td>
<td>1/1</td>
<td>0/13</td>
</tr>
</tbody>
</table>
RESULTS

- Mean age of patients = 54.8 years (range: 38-76)
- 60% (6/10) of cancers were HPV-associated
- 33% (3/10) patients were HIV infected
- HIV-infected patients were significantly younger (mean age = 39)
- 3 patients (33%) had positive sentinel nodes (one patient had a micro-metastasis which was only detected on ultra-staging)
- False negative rate = 0%
# RESULTS: Morbidity Data

<table>
<thead>
<tr>
<th>Complication</th>
<th>Number of Patients /10</th>
</tr>
</thead>
<tbody>
<tr>
<td>Vulval wound infection/breakdown</td>
<td>4</td>
</tr>
<tr>
<td>Urinary Tract Infection</td>
<td>0</td>
</tr>
<tr>
<td>Groin wound lymphocyst/infection/breakdown</td>
<td>4</td>
</tr>
<tr>
<td>Leg cellulitis</td>
<td>2</td>
</tr>
<tr>
<td>Leg lymphoedema</td>
<td>3</td>
</tr>
<tr>
<td>Other (atelectasis/LRTI)</td>
<td>1</td>
</tr>
</tbody>
</table>
### RESULTS: Mortality Data

<table>
<thead>
<tr>
<th>Status</th>
<th>Count</th>
</tr>
</thead>
<tbody>
<tr>
<td>Alive and well</td>
<td>6</td>
</tr>
<tr>
<td>Alive with disease</td>
<td>2</td>
</tr>
<tr>
<td>Died of disease</td>
<td>1</td>
</tr>
<tr>
<td>Died: other causes</td>
<td>0</td>
</tr>
<tr>
<td>Lost to follow up</td>
<td>1</td>
</tr>
</tbody>
</table>
Management Challenges in a Low Resource Setting

<table>
<thead>
<tr>
<th>Procedure</th>
<th>Cost</th>
</tr>
</thead>
<tbody>
<tr>
<td>Ultra-staging</td>
<td>R24 085.00</td>
</tr>
<tr>
<td>Lymphoscintigraphy</td>
<td>R20 000.00 (R2000.00 per patient)</td>
</tr>
</tbody>
</table>
Management Challenges in a High HIV Prevalence Setting

- **Sentinel Lymph Node Procedure** often not appropriate
- **Reactive Lymphadenopathy (HIV)**
- **Multifocal HPV-related disease**
- ONLY 10 sentinel nodes done in a 4 year period
- Should do 10 SLN procedures per year to keep up skills
Conclusion

• “SLN biopsy should be offered to well-selected patients by well-trained gynecologic oncologists. In clinical settings where vulval cancer is rare and surgeons’ experience is limited, referral to a high-volume center or surgeon is appropriate.”

• Increasing numbers of younger women with vulval squamous carcinoma

• Need to maintain vulval function and decrease psychosexual morbidity, while…

• …achieving adequate cure and survival rates

• Challenges of treating young immunocompromised women with multifocal disease
Conclusion

• SLN biopsy is feasible in our setting
• Safety concerns due to few patients suitable for the procedure, and therefore skills may not be maintained

• The way forward: collaboration with other centres
Acknowledgements

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- Dr Tony Wu, Division of Anatomical Pathology, NHLS and UCT
References


8) Slomowitz BM, Coleman RL, Oonk MH, van der Zee AG, Levenback A. Update on sentinel lymph node biopsy for early-stage vulvar cancer. *Gynecol Oncol* 2015;138:472-7
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Stellenbosch, Western Cape