TREATMENT OF KAPOSI SARCOMA IN HIV-1-INFECTED MOZAMBICAN CHILDREN WITH ANTIRETROVIRALS AND CHEMOTHERAPY

PEDIATRIC DAY HOSPITAL-MAPUTO, MOZAMBIQUE
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2nd International Workshop on HIV Pediatrics, 16-17 July 2010, Vienna Austria
KAPOSI SARCOMA

- HUMAN HERPES VIRUS- 8 (KSHV)
- HORIZONTAL / VERTICAL TRANSMISSION
- CLINICALLY: LYMPH GLANDS, SKIN, DISSEMINATED
- TYPES:
  - CLASSIC
  - TRANSPLANT-RELATED
  - ENDEMIC
  - AIDS-ASSOCIATED (AKS)

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SETTING

- Mozambique – HIV prevalence 12%
- > 100 000 HIV+ children
- Main reference center for pediatric AIDS – PDH, from Dec. 03 – Dec. 08
  - 4700 children HIV + on follow up
  - 1125 children on ART
  - 32 children with Kaposi Sarcoma

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METHODS

- Retrospective study to assess the outcomes of treatment of Kaposi’s sarcoma in HIV-1-infected children
- Diagnosis of KS – biopsy
- Diagnosis of AIDS – DNA PCR; HIV rapid tests
- TIS classification (ACTG)
  - T : tumour
  - I : immune status
  - S : systemic illness

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ANTIRETROVIRAL TREATMENT (ART)

- ART – eligibility criteria
  - WHO clinical stage III, IV
  - CD4 < 20%, children < 18 months
  - CD4 < 15%, children ≥ 18 months

- ART – drugs
  - AZT/D4T + 3TC + NVP/EFV (Lopinavir/r)

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CHEMOTHERAPY TREATMENT

- Paclitaxel: 75 mg/m², IV, every 4 weeks; 6 infusions

- Prednisolone: 1 mg/kg, oral, 24h before chemo.

- At least one month after the beginning of ART
PATIENT ASSESSMENT

- Physical examination
- Complete blood count, blood chemistry, CD4, chest-X ray, ECG – every four weeks before chemotherapy
- Biopsy – only at the beginning for diagnosis
- Modification in size and number of skin lesions or lymph glands – recorded each visit
RESULTS

- Total children with KS, N=32
- Early deaths, N = 4
- Children on treatment, N = 28
### BASELINE CHARACTERISTICS

<table>
<thead>
<tr>
<th>Variable</th>
<th>N (%) or mean (SD)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Age, years</td>
<td>8.3 (3.4)</td>
</tr>
<tr>
<td>Male</td>
<td>20 (71%)</td>
</tr>
<tr>
<td>Follow-up time, months</td>
<td>27.3 (14.9)</td>
</tr>
<tr>
<td>CD4%, before chemo.</td>
<td>16 (9.2)</td>
</tr>
<tr>
<td>D4T + 3TC + NVP</td>
<td>22 (78.6%)</td>
</tr>
<tr>
<td>D4T + 3TC + EFV</td>
<td>4 (14.3%)</td>
</tr>
<tr>
<td>D4T + 3TC + Kaletra</td>
<td>2 (7.1%)</td>
</tr>
</tbody>
</table>

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<table>
<thead>
<tr>
<th>TIS</th>
<th>Good prognosis (0)</th>
<th>Poor prognosis (1)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>All the following</td>
<td>Any of the following</td>
</tr>
<tr>
<td>Tumor (T)</td>
<td>Confined to skin, lymph nodes, minimal oral disease or all N= 17</td>
<td>T-associated edema or ulceration, extensive oral, GI, and non-nodal viscera N= 11</td>
</tr>
<tr>
<td>Immune system (I)</td>
<td>CD4 ≥ 15% N= 4</td>
<td>CD4&lt; 15% N= 23</td>
</tr>
<tr>
<td>Systemic illness (S)</td>
<td>No history of OI or thrush No “B” symptoms N= 14</td>
<td>History of OI or thrush “B” symptoms present N= 13</td>
</tr>
</tbody>
</table>
28 ART + CHEMO.

24 ALIVE

4 LATE DEATHS

21 COMPLETE REMISSION

4 DEATHS

3 RELAPSES

20 Alive and well
<table>
<thead>
<tr>
<th>ADVERSE EVENTS</th>
<th>GRADE 3</th>
<th>GRADE 4</th>
<th>TOTAL (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>BIOLOGICAL</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>ANAEMIA</td>
<td>0</td>
<td>2</td>
<td>2 (7.1)</td>
</tr>
<tr>
<td>NEUTROPENIA</td>
<td>1</td>
<td>1</td>
<td>2 (7.1)</td>
</tr>
<tr>
<td>THROMBOCITOPENIA</td>
<td>0</td>
<td>1</td>
<td>1 (3.5)</td>
</tr>
<tr>
<td><strong>CLINICAL</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>VOMITS</td>
<td>2</td>
<td>0</td>
<td>2 (7.1)</td>
</tr>
<tr>
<td>DIARRHOEA</td>
<td>1</td>
<td>0</td>
<td>1 (3.5)</td>
</tr>
<tr>
<td>CARDIAC ARRHYTHMIA</td>
<td>0</td>
<td>1</td>
<td>1 (3.5)</td>
</tr>
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</table>

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SUMMARY

- ALL AKS WERE TREATMENT NAIVE

- NO AKS PRESENTED AS IRIS

- CD4% BEFORE AND AFTER CHEMOTHERAPY: 16 (9.2) – 29.2 (2.7), \( P=0.02 \)

- NO DIFFERENCES IN AGE, CD4% AND “TIS” WHEN COMPARING ALIVE vs DEATHS, RELAPSES AND NON-RELAPSES

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CONCLUSIONS

- > 70% CHILDREN IN TOTAL REMISSION AFTER A MEAN OF 27 Mo FOLLOW-UP TIME

- ART + PACLITAXEL → GOOD EFFICACY WITH ACCEPTABLE TOXICITY

- AKS CAN BE IN SUSTAINABLE REMISSION IN HIV-1-INFECTED CHILDREN USING ART + PACLITAXEL

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ACKNOWLEDGEMENTS

• ICAP-COLUMBIA UNIVERSITY, MOZAMBIQUE

• UNICEF - MOZAMBIQUE

• STAFF – PEDIATRIC DAY HOSPITAL

• CHILDREN AND THEIR FAMILIES