Ethics
HIV and dialysis
HIV and kidney transplantation in SA

June Fabian
• Should we offer dialysis and transplantation (at all) in SA?

• And if so.....
What is governments responsibility?

- How many “slots” for dialysis is “enough”?

- What are the criteria for eligibility for a “slot”?

- In resource limited settings: How do we “ration” access to dialysis and transplantation?
Is it a citizens constitutional right to have access to dialysis?

Access to dialysis is a constitutional right - ONLY IN THE USA

Subrumani case in KZN – declared that it is NOT a constitutional right is SA (access rationed according to “availability of services”)

“life and death” committees well documented in USA in 1960’s to ration access to dialysis

Committees still ration access to dialysis in the state sector in SA

In the USA today, tho access to dialysis is unrestricted access to transplant is rationed: fewer blacks, women, elderly and poor
In SA – Tygerberg Hospital (Rafique Moosa, 2006)

- Worldwide: those who require dialysis increases by 7% per annum

- Since inception of dialysis program at Tygerberg 1976: 80 dialysis slots (no increase to date), population increase in the W/cape 2.9%;

- 1988 – 2003: 2442 patients assessed, 53% declined care. Only 15 HIV + patients were referred, all declined care

- Who was more likely to get a place: white, 20-40 years of age, employed, married, lived near a dialysis centre, not diabetic

- 60% were denied access based on social factors related to poverty (illiteracy, lack of funds for transport to the unit, poor compliance)
Historically wrt HIV:

- HIV + dialysis = BAD
- HIV + ART + dialysis = equal to NON-HIV
- HIV + transplant = BAD
- HIV + ART + transplant = equal to NON-HIV, better than diabetics

- All based on US + European data
- Where is local data?
Outcomes of HIV infected individuals with end stage kidney disease on chronic hemodialysis
Study design

• Retrospective case control study

• HIV infected individuals with ESKD on CHD
  – Survival
  – Morbidity
  – Blood parameters (HIV, ESKD)

• 1\text{st} January 2006 – 31\text{st} December 2010
National Renal Care (NRC) CHD Units
Staff in the units trained for consenting process

HIV prevalence 10.8%

(196 HIV+ / 1814 CHD population – 31 December 2010)
National consenting rates

196 HIV+
48 consents
Consent rate 24.5%

Kwazulu-Natal: 21
Gauteng: 9
Eastern Cape: 7
Western Cape: 5
Northern Cape: 2
Northwest: 3
Limpopo: 1

1814 HIV-
96 consents

2:1
Matched

Ethnicity
Gender
Age
## Demographics

<table>
<thead>
<tr>
<th>Parameter</th>
<th>HIV positive (n=48)</th>
<th>HIV negative (n=96)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Av. time on study</td>
<td>31 months (range 7 - 60)</td>
<td>30 months (range 6 – 60)</td>
</tr>
<tr>
<td>Ave age</td>
<td>43yrs (range 18-60)</td>
<td>45yrs (range 21-63)</td>
</tr>
<tr>
<td>Gender</td>
<td>female 20 (42%)</td>
<td>female 39 (41%)</td>
</tr>
<tr>
<td></td>
<td>male 28 (58%)</td>
<td>male 57 (59%)</td>
</tr>
<tr>
<td>Ethnicity</td>
<td>black 47 (98%)</td>
<td>black 81 (84%)</td>
</tr>
<tr>
<td></td>
<td>mixed race 1(2%)</td>
<td>mixed race 11 (11%)</td>
</tr>
<tr>
<td></td>
<td></td>
<td>asian 4 (5%)</td>
</tr>
</tbody>
</table>
### Demographics

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<thead>
<tr>
<th>parameter</th>
<th>HIV positive (n=48)</th>
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</thead>
<tbody>
<tr>
<td>Housing</td>
<td>94% = permanent dwelling</td>
<td>98% = permanent dwelling</td>
</tr>
<tr>
<td>Members / household</td>
<td>3.9 (range 1-8)</td>
<td>4.2 (range 1-11)</td>
</tr>
<tr>
<td>Running water</td>
<td>86%</td>
<td>88%</td>
</tr>
<tr>
<td>Employed</td>
<td>73%</td>
<td>64%</td>
</tr>
</tbody>
</table>
## Morbidity

<table>
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<tr>
<th>parameter</th>
<th>HIV positive (n=48)</th>
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</tr>
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<tbody>
<tr>
<td><strong>Prevalence</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Diabetes</td>
<td>9/48 (19%)</td>
<td>18/96 (19%)</td>
</tr>
<tr>
<td>Hypertension</td>
<td>33/48 (69%)</td>
<td>82/96 85%</td>
</tr>
<tr>
<td><strong>Incidence rate</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Cerebrovascular Accident</td>
<td>nil</td>
<td>4/238 person years 17 per 1000</td>
</tr>
<tr>
<td>Coronary Artery Disease</td>
<td>nil</td>
<td>7/238 person years 29 per 1000</td>
</tr>
<tr>
<td>TB</td>
<td>9/123 person years 73 per 1000</td>
<td>2/238 person years 8 per 1000</td>
</tr>
<tr>
<td></td>
<td>IRR 8.7</td>
<td></td>
</tr>
</tbody>
</table>
# Morbidity

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<thead>
<tr>
<th>parameter</th>
<th>HIV positive (n=48)</th>
<th>HIV negative (n=96)</th>
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</thead>
<tbody>
<tr>
<td>Transplant list</td>
<td>Yes = 2/48 (4%)</td>
<td>Yes = 18/96 (19%)</td>
</tr>
<tr>
<td>(31/12/2010)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Vascular access</td>
<td>AVF 30/48 (63%)</td>
<td>AVF 58/96 (60%)</td>
</tr>
<tr>
<td>(31/12/2010)</td>
<td>AVG = 1/48 (2%)</td>
<td>AVG 7/96 (7%)</td>
</tr>
<tr>
<td></td>
<td>Perm cath 13/48 (27%)</td>
<td>Perm cath 19/96 (20%)</td>
</tr>
<tr>
<td></td>
<td>Unknown 4/48 (8%)</td>
<td>Unknown 12/96 (13%)</td>
</tr>
</tbody>
</table>
## Morbidity

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<th>parameter</th>
<th>HIV positive (n=48)</th>
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<tbody>
<tr>
<td>Total Number of Access-related admissions</td>
<td>48/123 person years</td>
<td>89/238 person years</td>
</tr>
<tr>
<td></td>
<td>390 per 1000</td>
<td>373 per 1000</td>
</tr>
<tr>
<td></td>
<td>IRR 1.05</td>
<td></td>
</tr>
<tr>
<td>Access-related infections that required admission</td>
<td>9/123 person years</td>
<td>4/238 person years</td>
</tr>
<tr>
<td></td>
<td>73 per 1000</td>
<td>17 per 1000</td>
</tr>
<tr>
<td></td>
<td>IRR 4.4</td>
<td></td>
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</tbody>
</table>
## HIV management

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<tbody>
<tr>
<td>Average duration of ART in months (n=28)</td>
<td>31 (range 7-60)</td>
</tr>
<tr>
<td>HIV viral load suppressed on treatment</td>
<td>16/37 (43%)</td>
</tr>
<tr>
<td>HIV viral load not suppressed on treatment</td>
<td>21/37 (57%)</td>
</tr>
<tr>
<td>Not on treatment</td>
<td>3/48 (6%)</td>
</tr>
<tr>
<td>No data</td>
<td>8/48 (17%)</td>
</tr>
</tbody>
</table>

on treatment 37/48
ART exposure

- NRTI
- NNRTI
- PI

n=32
CD4 counts in HIV+

mean CD4 count
Haemoglobin                  Ferritin

Year 1 2 3 4 5
Hb HIV -
Hb HIV +

Year 1 2 3 4 5
ferritin HIV -
ferritin HIV +

Statistically significant $p< 0.01$

Regression analysis (STATA 11)
Regression analysis (STATA 11)
Regression analysis (STATA 11)
Albumin

Statistically significant p<0.05

Regression analysis (STATA 11)
• Survival was the **same** in both groups
  – 100% in HIV+
  – 99% in HIV – (1x kidney transplant)

– Survival was better than in any US or European study to date
Summary

- **HIV+ group (compared to HIV – group):**
  - SURVIVAL IS THE SAME
  - Lower prevalence of hypertension
  - Lower incidence of cardiovascular and cerebrovascular events (? dt lower BP/Hb)
  - Higher incidence of infection-related complications (access; TB)
  - Significantly lower Hb and albumin - ? clinical relevance wrt survival outcome
Summary

• HIV Management
  – Minimal data available in dialysis units
  – ART – 57% were not virally suppressed
  – No standard protocols for monitoring (HIV) viral load and CD4 count
  – Transplant listing rates low
Other studies

• Wits Academic Teaching Hospital Complex
  – HJH; CHB.; CMJAH
  – 59 patients from 2001 – 2012
  – 56% female; 93% black, mean age 37yrs
  – Mean follow up 30 months
  – Median CD4 count at initiation of dialysis was 230cells/mm³
  – 63% were on peritoneal dialysis
  – Mortality rate 51% (two thirds were on peritoneal dialysis)
  – Cause of death: fluid overload (38%); peritonitis (31%)
whats the point? .......

• HIV patients do VERY well on CHD (private sector)

• HIV patients do ?less well on CAPD (state sector) – >60% of deaths were preventable; ? This be dt lower entry level CD4 counts?

• Is this a reflection of access to health care/socio-economics?

• Can government afford to snub private:public partnerships with the above stats?

• There is NO justification to restrict access to RRT solely on the basis of HIV status

• HIV patients are but 1 of a group that are discriminated against (poor socioeconomic status; elderly, black, women)
Can government displace the “dirty” job of turning patients down to clinicians?

Can government justify an absence of population related increases in dialysis slots?

Can industry justify the cost of RRT?

Eligibility criteria for RRT in state?
  – TRANSPLANTABILITY – is this written in stone?
  – Transplant rates are abysmally low
  – Patients wait for much longer
  – Only 19% of private sector patients are listed for Tx
  – Criteria for HIV patients: are we sabotaging them?
As the patients advocates:
As a medical profession, can we afford NOT TO SPEAK OUT?

Questions